corridor master Plan

Unifying the Aesthetic Treatment of Highway Improvements

Caltrans

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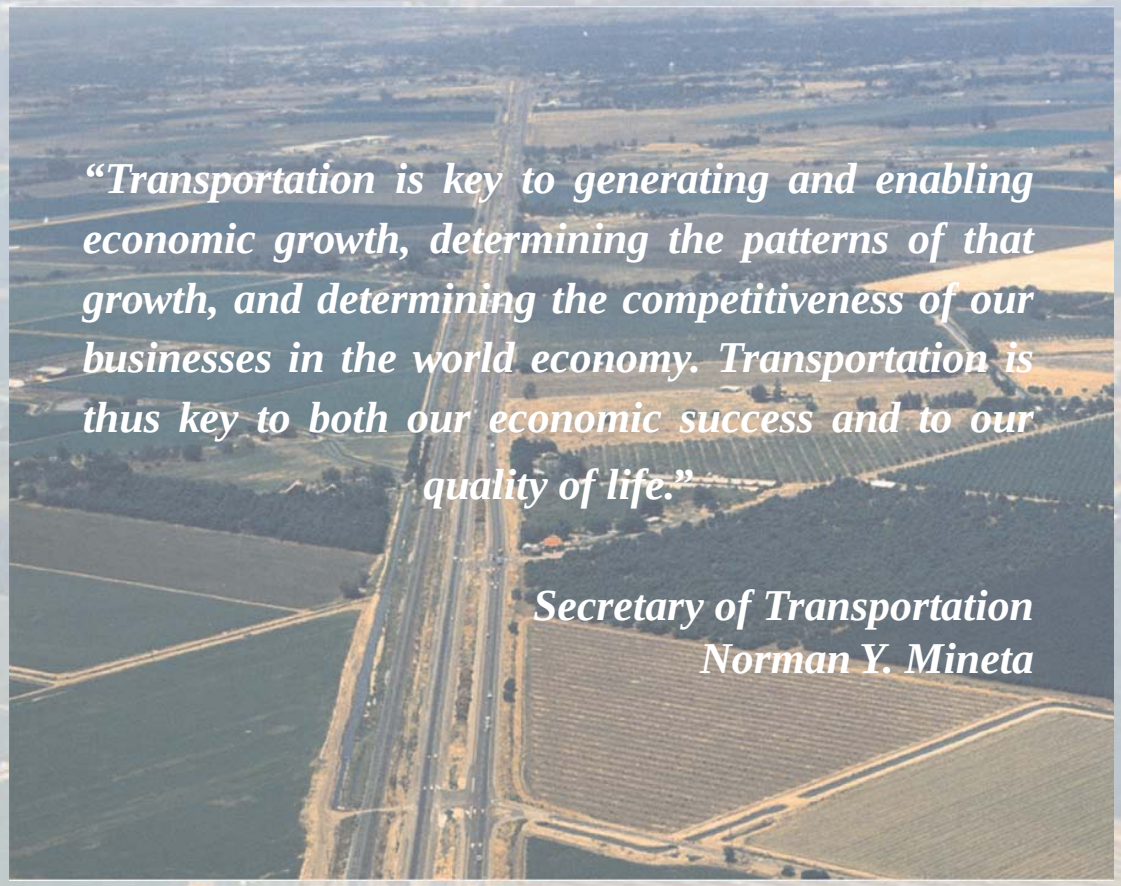

"Transportation is key to generating and enabling economic growth, determining the patterns of that growth, and determining the competitiveness of our businesses in the world economy. Transportation is thus key to both our economic success and to our quality of life."

Secretary of Transportation
Norman Y. Mineta

CHAPTER 1

INTRODUCTION

1.1 Overview and Mission Statement

The Route 99 Corridor Master Plan covers the area from the Route 99 junction with Interstate 5 to Lodi. This 274-mile section of Route 99 runs south to north through the counties of Kern, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin in the San Joaquin Valley. It also spans Caltrans' Districts 6 and 10 (Figure 1-4). Further to the north in Caltrans District 3, Route 99 crosses Sacramento and Sutter counties. This northern part of Route 99 is not covered in the master plan.

Figure 1-1
Identifying transportation related needs along the corridor.

Along the corridor from Interstate 5 to Lodi, the appearance of Route 99 changes from county to county, with varying styles of structures, slope paving, median treatments, soundwalls, retaining walls, and landscaping.

Caltrans and local communities are working together to develop a master plan to improve the Route 99 corridor (Figures 1-1, 1-2, and 1-3). The Route 99 Corridor Master Plan will strengthen community identity, unify freeway improvements, and develop design concepts that tie communities throughout the corridor together and foster a valley-wide identity. In addition to dealing with aesthetic concerns, this document will discuss capacity needs as increased regional and interregional traffic puts more stress on the corridor.

As a major route in the most productive agricultural region in the world, Route 99 is critical to the economic vitality of the state. Senate Concurrent Resolution 17, authored by Senator Jim Costa, recognized this and directed Caltrans to identify transportation-related needs along the corridor that will relieve congestion and improve the movement of goods, enhancing economic development of the San Joaquin Valley.

Figure 1-2
Caltrans and local communities working together to develop a master plan.

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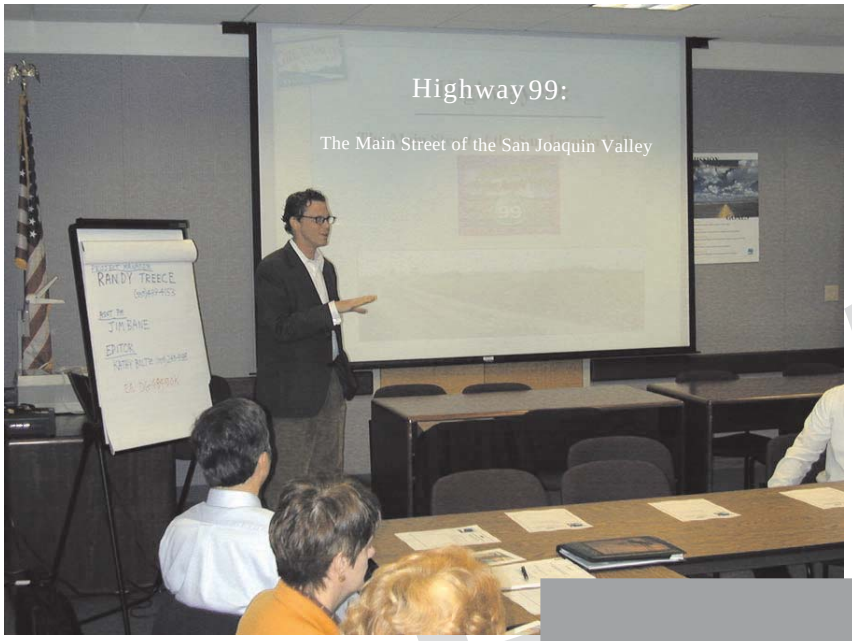

Figure 1-3
Doug Jackson of the Great Valley Center gives a presentation on Route 99 to the Route 99 Corridor Master Plan Project Development Team

The "Report on Transportation Needs between Bakersfield and Sacramento" (May 2002) summarizes these needs.

The emphasis of the Route 99 Corridor Master Plan is to promote unity in landscape and structural aesthetics throughout the Route 99 corridor, as well as to recognize the capacity needs as directed by Senate Concurrent Resolution 17. The Master Plan is intended to cover the seven counties mentioned above, but will also be coordinated with other planning efforts to improve Route 99 from Bakersfield to Sacramento.

By looking at this big picture, the Route 99 Corridor Master Plan will create a lasting legacy that promotes economic opportunity and a better quality of life for all of the communities along the corridor.

Mission Statement:

To produce a Route 99 Corridor Master Plan which guides public and private sector decisions; provides a corridor identity; lays out specific improvement approaches and themes; is collaborative with other Route 99 plans and programs; and has wide community and public involvement that results in ownership of the plan by all.

Figure 1-4
Map of the Route 99 Corridor Master Plan Area

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What Does "Corridor" Mean?

The Corridor as defined for the Route 99 Corridor Master Plan encompasses:

- *The area under the direct control of Caltrans, including the ultimate right-of-way for State Route 99.*
- *The immediate view from the right-of-way. This area involves a collaborative planning effort between Caltrans and local planning agencies.*

1.2 Goals with Supporting Objectives and Strategies

The following goals will guide improvements along the Route 99 Corridor. Each goal is followed by objectives and strategies, which are specific actions, designed to fulfill the mission of the Route 99 Corridor Master Plan.

Goal 1: Adopt a Route 99 Corridor Master Plan that is universally accepted and guides public and private sector decisions along the corridor.

Objective 1A
Obtain resolutions of acceptance for the Route 99 Corridor Master Plan from cities, counties, and Chambers of Commerce.

Strategies to Support Objective 1A:

- Actively encourage local entities to take action in support of the Master Plan.
- Actively encourage cities and counties to approve local land use ordinances that support the concepts of the Route 99 Corridor Master Plan.
- Caltrans staff will be available to any entity along the Route 99 corridor to provide expertise on the Route 99 Corridor Master Plan.

Objective 1B
Obtain public input and support for the Master Plan.

Strategies to Support Objective 1B:

- Seek public input as the Route 99 Corridor Master Plan is being developed and periodically thereafter.
- Use Regional Transportation Planning Agency forums as one method of obtaining public input.
- Conduct at least one public workshop in both Caltrans District 6 and District 10 during the development and any up date of the Master Plan.
- It will be Caltrans' policy to continuously post the Route 99 Corridor Master Plan on the Web sites of Caltrans District 6 and District 10.

Objective 1C
Enhance individual community identity.

Policies Strategies to support Objective 1C:

- Establish an ongoing Route 99 Corridor Master Plan Advisory Team to review and comment on projects or proposals in or next to the corridor and to update the Master Plan as appropriate. By guiding decisions that affect the corridor, this team will make sure the Master Plan continues to have life and meaning. The current Project Development Team for the Route 99 Corridor Master Plan will establish the composition, structure, and authority of the advisory team as part of the final Master Plan.
- The Route 99 Corridor Master Plan Advisory Team will decide whether individual city, county, and community proposals are consistent with Route 99 Corridor themes. The intent is to permit local proposals while staying consistent with corridor themes.

Figure 1-5
Local government employees provide input on the Route 99 Corridor Master Plan

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Goal 2: Create a San Joaquin Valley Route 99 Corridor identity.

Objective 2A
Establish a Route 99 corridor logo.

Strategies to support Objective 2A:

- The Route 99 Corridor logo will be selected by the Route 99 Corridor Master Plan Project Development Team. The logo is primarily intended to be used for the Route 99 Corridor Master Plan and any related documents An alternate logo reflecting a corridor theme (s) may be used on signs along the corridor.
- Any use of the logo for signs along the corridor must comply with current state and federal sign standards and policies and must be approved by Caltrans. Individual counties or com munities may use the Route 99 Corridor logo or a different design for signs.

Objective 2B
Establish corridor themes (landscape, color, median, structures, etc).

Strategies to support Objective 2B:

- Corridor themes will be established and updated as needed by the Route 99 Corridor Master Plan Advisory Committee.
- Specific application of corridor themes must be consistent with current State and federal standards and policies and approved by Caltrans.
- Specific city, county, and community plans related to the Route 99 corridor are encouraged and will be reviewed by Route 99 Corridor Master Plan Advisory Committee for consistency with the Route 99 Corridor Master Plan.

Objective 2C
Develop design concepts and aesthetic guidelines.

Strategies to support Objective 2C:

- Design concepts will comply with the most currently approved Caltrans design standards.
- Design concepts and aesthetic treatments applied along the Route 99 corridor will be consistent with the most current Caltrans policy on Context Sensitive Solutions (See Section 4.1).

Goal 3: Establish a plan that improves operations, maximizes safety, fosters economic vitality, and protects environmental resources.

Objective 3A
Advocate overall corridor needs.

Strategies to support Objective 3A:

- Support safety, congestion relief and rehabilitation improvements consistent with the Route 99 Transportation Concept Report (TCR) and the Interregional Transportation System Plan (ITSP).
- Ensure the safety of drivers and maintenance workers first before considering any proposals to add signs or public art.
- Establish and update a Route 99 Corridor Action Plan every two years consisting of proposed project improvements covering the next 20 years.

Objective 3B
Establish corridor improvement principles by category of improvement (added capacity, soundwalls, rehabilitation, median barriers, traveler information, etc.) or enhancement (landscape, color schemes, structure treatment, etc.).

Strategies to support Objective 3B:

- Proposals for traditional improvements (new capacity, rehabilitation, median barriers, soundwalls, etc.) will be based upon established criteria.
- Proposals for non-traditional improvements (environmental enhancements, traveler information services, bridge, and soundwall treatments, etc.) or those proposed improvements without established criteria will be reviewed by the Route 99 Corridor Master Plan Advisory Team and submitted to Caltrans for final approval.

1.3 Challenges

Route 99 is an integral part of the state highway system and it crosses many diverse areas. The effort to produce a Route 99 Corridor Master Plan will require input and consensus from many departments within Caltrans, as well as local partners. At a minimum, we face the following challenges:

1. Reaching a consensus among local partners with respect to highway treatments and themes
2. Reaching a consensus among departments within Caltrans to achieve a balance between design requirements, budget limitations, physical constraints, and aesthetic possibilities
3. Keeping the planning effort focused, specific and concise, while being timely and complete
4. Developing a plan that will stand the test of time.
5. Creating an aesthetically pleasing route with limited right-of-way.
6. Recognizing the demand for capacity increasing improvements that SCR 17 mandates, despite limited state-owned right-of-way.

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1.4 Local and Regional Cooperation

Up and down the San Joaquin Valley, beautification of the Route 99 corridor has become a priority. From county groups to small rural communities, efforts are unfolding to make Route 99 more attractive. Following is a list of some of these current beautification efforts:

District 6

- **Fresno County - The Association for the Beautification of Highway 99**

The first product produced for the County by this Association was the "Highway 99 Beautification Master Plan." The implementation of the Plan is an on-going effort for the association.

- **Bakersfield Freeway Beautification Advisory Committee**

The goal of this group is to produce a "Freeway Beautification Plan" for Bakersfield. The focus of this effort is the Route 99 corridor, with Routes 58 and 178 included as well.

- **Pixley Redevelopment Project Area Committee**

One of the goals of this plan is landscaping of the Highway 99 Pixley Corridor. Committee members are actively pursuing support for this project.

- **Goshen Community Plan**

This plan is a component of the Tulare County General Plan. Elements addressing aesthetics along the Route 99 corridor are included in the plan.

District 10

- **Turlock**

The City is developing a Beautification Master Plan that includes the Route 99 corridor. The plan proposes to landscape a portion of Route 99 and its interchanges in orchard patterns. It also proposes "Gateway" entrances with attractive streetscaping, signs, planters, and lighting.

- **Stanislaus County**

The Stanislaus Council of Governments is setting up a Route 99 Corridor Task Force to develop a "Corridor Enhancement Plan" that will span the entire county. A Route 99 Enhancement Partnership for an Integrated Planning Team, an extension of this effort, will focus on improving and expediting efforts to improve the image of the community along Route 99.

- **Stockton Beautiful**

Beautification efforts for this group include the Route 99 corridor.

Valley Wide

- **The Great Valley Center**

A Highway 99 Task Force has been organized and is working on developing a cohesive approach to transform the Route 99 corridor into a "Main Street of the San Joaquin Valley." The limits of the project stretch from Kern County to San Joaquin County.

- **Route 99 Natural Habitat Conservation Plan**

Caltrans is working with the California Department of Fish and Game, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers to establish a Natural Habitat Conservation Plan. This plan is being created to protect natural resources as needed improvements are made along the Route 99 corridor over the next 25 years.

CHAPTER 2 EXISTING FACILITY

2.1 Route 99 Background

To accomplish the goals and objectives of the Route 99 Corridor Master Plan, it's important to first take a look at the corridor as it is today. The background of the corridor, as well as its physical characteristics and the resources surrounding it, can set the stage to plan for the future.

Description

As stated in the Introduction, the Master Plan covers 274 miles of Route 99, a 416-mile-long route. Along this 274-mile segment of Route 99, 131 miles are located in urban areas, and 143 miles are in rural areas. Only 23 miles are considered "freeway gaps" (see Section 2.2.2). These are currently all funded for conversion to full freeway standards.

The Annual Daily Traffic in the area ranges from a current level of 32,000 near Interstate 5 in Kern County to over 100,000 in Bakersfield and Modesto. The projected traffic range in 2025 is from 63,000 to 174,000. Truck traffic accounts for anywhere from 12 percent in the Ceres area to 38 percent near Interstate 5.

Urban versus Rural Areas

Nine major cities along this corridor are identified as urban areas, which are defined by a population of 50,000 or greater as determined by the U.S. Census Bureau. The nine urban areas along this segment of Route 99 are Bakersfield, Visalia, Fresno, Merced, Turlock, Modesto, Manteca, Stockton, and Lodi. Other cities are emerging as urban areas, and may be treated as urban rather than rural for planning purposes. Figure 1-4 identifies all the counties and communities along Route 99.

The State applies different standards, and subsequent treatment, on the rural and urban portions of Route 99. Urban areas, for instance, are usually characterized by:

1. Interchanges spaced closer together
2. More through and auxiliary lanes to handle greater traffic volumes, to increase capacity, and to decrease time delays for a mix of local and regional traffic
3. More attention to landscaping, soundwalls, and fencing to enhance aesthetics and safety
4. Depressed or elevated freeways to provide separation from local roads
5. Greater need for storage to deal with storm water runoff, although environmental concerns are changing the way storm water runoff is managed in both urban and rural areas.
6. Increased emphasis on walkways, lighting, and Intelligent Transportation Systems such as ramp meters and changeable message signs

In contrast, these traits are not typically found in rural areas. The different needs of urban and rural areas should be taken into account when making choices along Route 99 or considering the issues discussed in the following section.

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The Importance of Route 99

As the principal north/south freeway in the Central Valley, Route 99 is also a major connector to all east/west routes that link to the San Francisco Bay Area, the Central Coast, and the Sierra Nevada Mountains. Its importance to the movement of people, goods, and services is shown by its designation as:

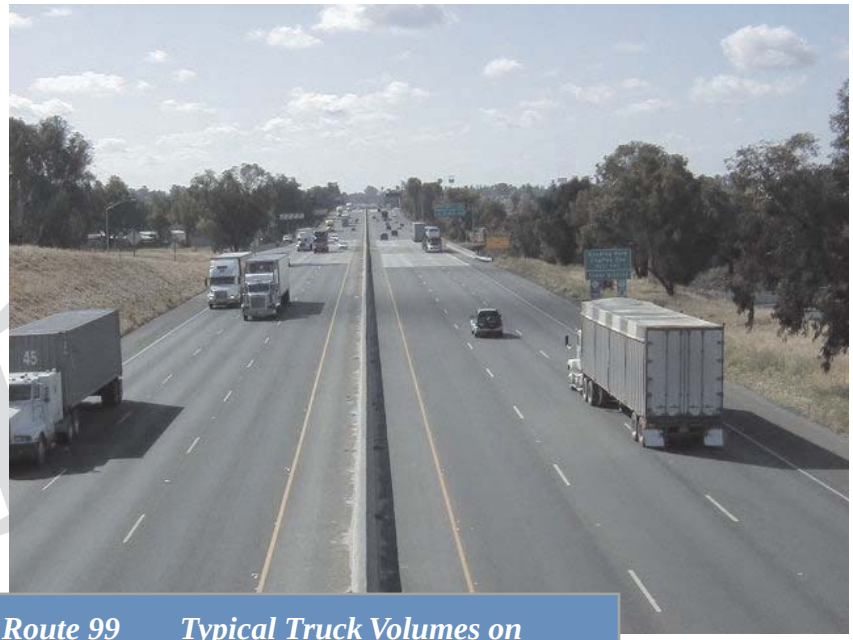
- **A major route in the most productive agricultural region in the world and is critical to the economic vitality of the state**
- **A State High Emphasis Focus Route on the Interregional Road System. Because of this, there are many capacity improvements noted in the 1998 Interregional Transportation Strategic Plan and the 2000 Update of the plan.**
- **A "Priority Global Gateway" for goods movement in the Global Gateways Development Program (January 2002)**
- **A highway on the National Highway System as part of the Strategic Highway Corridor Network, under the Federal-aid Surface Transportation Program . It is also a STRAHNET Route**
- **Part of the National Network of the Surface Transportation Assistance Act (STAA) for large trucks**

2.2 Physical Characteristics and Issues

Much of Route 99 was constructed in the late 1950s and early 1960s. Today's physical issues on the route, which are discussed below, are primarily related to age, limitations created by the original geometry, and increased traffic volumes in places where there is congestion.

2.2.1 Highway Capacity Needs

The current capacity on Route 99 is not always adequate, especially on urban segments. As traffic volumes have increased, congestion from traffic merging on and off the freeway has gotten worse. This is evident by reduced speeds and bottlenecks-especially during commute hours. Upgrades to the system have included adding lanes to both Route 99 and its ramps to provide more capacity. However, congestion persists in many urban areas during peak periods.



Truck Volumes on Route 99	
Kern County	*29%*
Tulare County	*27%*
Fresno County	*22%*
Madera County	*24%*
Merced County	*21%*
Stanislaus County	*19%*
San Joaquin County	*19%*

Typical Truck Volumes on State Highways by Comparison	
Ventura County	*4%*
Los Angeles County	*9%*
Sacramento County	*8%*

Figure 2-1
Truck Traffic on Route 99

The percentage of truck traffic on Route 99 may have the greatest effect on capacity (Figure 2-1). Other physical characteristics that affect capacity include the number and width of lanes; the location, spacing, and type of interchanges; the presence and width of shoulders; the condition of the pavement; and gaps in the freeway system. There will be a significant need to add lanes on Route 99 over the next 25 years, but right-of-way and environmental constraints will put limits on what can be built.

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2.2.2 Operational and Structural Needs

Three of the factors listed above-gaps in the freeway segments along Route 99, the spacing and types of interchanges, and the condition of the pavement-play a major role in both the current and future capacity of the corridor in certain areas.

Freeway Gaps

The average motorist is inclined to drive Route 99 as if it were all freeway. In fact, Route 99 has segments that are not freeway because they include at-grade intersections where cross traffic enters and leaves the expressway without the benefit of an interchange (Figure 2-2). These segments are called "freeway gaps" and are in reality expressways. Caltrans is aware of these gaps and continually monitors the traffic volume and turning movements. Many gap segments have been converted freeway, to eliminating signal lights and congestion. Land use changes can also trigger the requirement to convert from expressway to freeway.

Figure 2-2
A pick up crosses traffic at a "freeway gap" on Route 99

Interchanges

No single design feature has a greater impact on the urban corridor than the interchange. An interchange is a high-volume intersection characterized by a grade separation between the highway and the cross street that is accessed by a ramp. The ability to accommodate high volumes of traffic safely and efficiently through interchanges depends largely on the type of ramp, ramp volumes, and conditions between the ramp connections and local roads. Today, simple modifications to existing interchanges on Route 99 are limited by the state-owned right-of-way and local development. Spot congestion or bottlenecks are becoming more common as traffic volumes increase (Figure 2-3).

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Many Route 99 urban interchanges have limited room for vehicles waiting to enter or leave the highway. They also have short deceleration and acceleration lengths. This creates congestion when high volumes of traffic back up on ramps, when drivers must slow down on the freeway or when slow-moving trucks interrupt the traffic flow.

Limited spacing between interchanges has a negative impact on the flow of traffic. This is evident in urban areas during peak commute periods when the traffic is forced to slow because of traffic entering and exiting the highway. Whenever possible, spacing between interchanges needs to be increased to reduce congestion. In the future, this may result in closing some interchanges to improve spacing.

Changes to existing interchanges, however, are limited by development next to the freeway, environmental issues, and cost. Minor changes to the existing geometry have provided some improvements, but more backups can be expected unless modifications are made.

Figure 2-3
Congestion on Route 99

Pavement

Today, trucks make up as much as 38 percent of the traffic on Route 99 compared to as little as seven percent in portions of the Los Angeles area. Extra stress from the weight and amount of truck traffic on a 35-year old pavement is the biggest factor in the poor pavement conditions (Figure 2-4). A bumpy ride is the most obvious sign of pavement failures. The poor ride is caused by faulting (settlement across concrete joints), concrete pavement or supporting base failures, and aging asphalt overlays that need more frequent rehabilitation. The best long-term solution is complete concrete pavement reconstruction, which results in nearly 50 years of maintenance-free use. However, because of construction time constraints, reconstruction of concrete pavement is problematic and costly.

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2.2.3 Highway Safety

Creating a safe driving environment has and continues to be a high priority. A major focus has been on roadside safety both in the median and in the highway shoulder. A considerable number of median projects are currently in design and construction. These projects will avoid affecting trees or other plantings whenever possible. Along the side of the road, the emphasis has been on providing a clear recovery zone, which is the distance from the edge of the traffic lane to the nearest object.

Beginning in earnest in the late 1960s and continuing through today, removal or modification of fixed objects has made the roadside significantly safer. These changes include:

- Removing butterfly signs between the highway and exit lanes
- Putting lamps and signs on bases that breakaway when a vehicle hits them
- Selectively removing unyielding objects from the roadside or adding barriers or cushions to absorb the energy of a collision and shield fixed objects

Safety improvements have also been made to barriers and end treatments. Today, rehabilitation or capacity improvement projects offer an opportunity to incorporate cost-effective roadside safety and design features.

Figure 2-4
Surface cracking on Route 99

In recent years, the public and environmental groups have requested changes in the way decisions are made regarding many issues. This includes decisions on safety-related improvements, such as the removal of trees from the median and roadside areas. Caltrans must balance the need to maximize safety with environmental benefits.

Median Barriers
Median barriers are used on divided highways to reduce the risk of an out-of-control vehicle crossing the median and colliding with opposing traffic. The approved standard types of median

barriers for new installation are concrete safety-shaped barriers (Figure 2-5) and metal thrie-beam barriers (Figure 2-6). Temporary railing (type K) may be used under certain conditions. These median barriers are capable of preventing nearly all of the cross-median accidents and providing maximum safety to the occupants of a vehicle.

Figure 2-5
Concrete Safety-Shaped Median Barrier

Figure 2-6
Thrie-Beam Median Barrier

The median barrier design appears to be simple, but in reality must include many factors to be effective. Median design must consider safety, right-of-way, drainage, planting, aesthetics, maintenance, traffic, available median width, and future construction. Caltrans devotes a lot of attention to median barriers and is continually reviewing the criteria for placement and replacement of these barriers.

Median Barrier Policy for Freeways And Expressways
The need to design and construct median barrier projects in a timely manner cannot be overemphasized.

Median widths are measured from the edge of the traffic lanes in one direction of travel to the same edge of the traffic lanes in the opposite direction. In other words, median shoulders are included as part of the median width.

Median widths are divided into four sizes as follows:

- Equal to or less than 36 feet
- Greater than 36 feet to less than 46 feet
- Equal to 46 feet
- Greater than 46 feet

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The median widths vary significantly in a corridor of this length; however, the minimum median width should be 22 feet. In rural areas, however, the minimum median width should be 61 feet.

For median widths equal to or less than 36 feet, concrete barriers are preferred; thrie-beam barrier is used in wider medians.

When Route 99 was in its major development as a freeway, right-of-way was acquired for a roadway of four, six, or eight lanes. Most of the Route 99 freeway segments started as a four-lane road with a median width large enough to accept two more lanes with shoulders and still retain a median at minimum or greater width. Along the Route 99 Corridor, most of the right-of-way was acquired for a six-lane facility, with widening expected to take place in the median.

In a few cases, the right-of-way along Route 99 was initially acquired for an eight-lane freeway. In this case, the right-of-way was acquired for the ultimate (eight-lane) roadway. On these segments of the route, the full maximum freeway can be built and it will have the correct median width and median barrier.

Any of the existing route segments that were not planned for an ultimate eight-lane roadway will have significant problems with future widening. As traffic increases, these segments of the route will require extra effort in terms of planning, design, and reaching an agreement with the community. Alternatives with impacts must be carefully developed and presented to the communities involved. These alternatives will include new alignment, new right-of-way on one or both sides of the existing freeway or significant retaining walls to contain a wider freeway within the available right-of-way.

Placement of the appropriate median barrier with a standardized median width will play a major role in future development of the Route 99 Corridor.

Figure 2-7
One of the three rest areas on Route 99 between Lodi and Bakersfield

Rest Areas

Rest areas are recognized as an important part of the Department's traffic safety efforts. Driver fatigue and drowsiness, along with

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unsafe roadside parking, are significant problems that may be reduced when rest areas, or other safe stopping opportunities, are available.

Caltrans provides "Safety Roadside Rest Areas" for motorists to stop and rest for short periods (Figure 2-7). These rest areas include parking areas, drinking water, toilets, tables, benches, telephones, and information panels. Some rest areas may also include other facilities for motorists.

In 1962, the Rest Area program developed spacing guidelines of approximately 30 miles between rest areas. In 1972, the spacing was increased to 60 miles. However, the gap between rest areas on Route 99 is significantly greater than this.

The next closest rest area south of Phillip S. Raine is 94 miles away, at Tejon Pass on Interstate 5. Between C.H. Warlow and Enoch Christoffersen there is a distance of 108 miles. The next closest rest area to the north of Enoch Christoffersen is 97 miles away at the Elkhorn Safety Roadside Rest Areas on Interstate 5 (Figure 2-8).

In addition to the significant distance between sites, these rest areas are severely under capacity, resulting in a critical shortage of available parking spaces. This has the greatest impact on the large number of truckers moving goods within the CentralValley. Many local cities have ordinances that restrict overnight truck parking on city streets. As a result, weary truckers keep driving on the highway or park illegally along many highway ramps.

There are currently three rest areas along the Route 99 Corridor. Two are located in District 6, Phillip S. Raine and C.H. Warlow, both in Tulare County. One rest area, Enoch Christofferson, is in Stanislaus County in District 10.

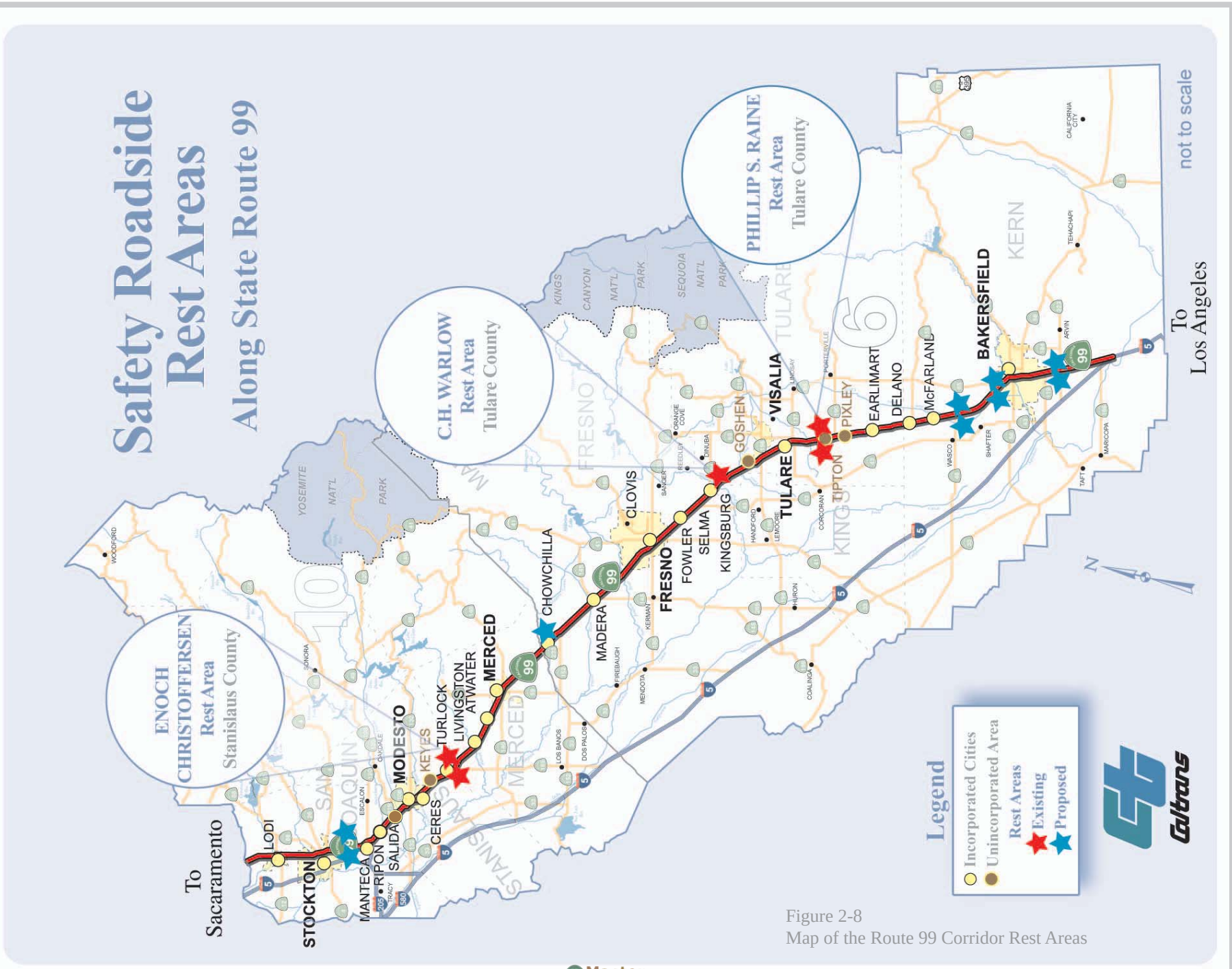

Figure 2-8
Map of the Route 99 Corridor Rest Areas

2.2.4 Highway Appearance

In addition to safety, aesthetics and landscaping are vital to the corridor because they affect the perceptions of travelers and residents about the region. These perceptions can in turn influence the economy and quality of life in the communities along the corridor.

Aesthetics is most often associated with the creation of a pleasing appearance or effect. In transportation design, aesthetics may be defined as dealing with the visual integration of the highway into its surroundings. An aesthetically pleasing transportation corridor can either blend into or complement its setting.

The Route 99 corridor is an integral part of the communities that it crosses and it also acts as the gateway to urbanized areas. The highway and adjacent roadsides are the first and frequently the only impression travelers have of a community. Community pride and commerce are, therefore, affected by the highway's appearance.

Highway Structural Themes

Along the corridor, various transportation improvements have affected the appearance of the route. These improvements range from lane additions to new freeway-to-freeway connectors, as well as various improvements for safety and operation of the roadway. Because many of the improvements have occurred over several decades, there is no unifying theme or appearance for the route. A variety of old and modern bridges, sign panels, landscape types, fences, and overhead lighting fixtures have been installed over the life of the roadway. The lack of cohesive elements has left the corridor with a diminished aesthetic quality, cluttered roadsides, and no community identity.

In recent years, soundwalls have also sprung up along Route 99. These soundwalls have been added to reduce noise in conjunction with some roadway projects. Many of these walls have been placed without the benefit of planting and have become graffiti-covered eyesores. Others are in need of repair, restoration, or replacement.

In the view outside of Caltrans right-of-way, travelers often look out at abandoned buildings, junkyards, billboards, microwave towers, and trash. Communities will have to work together to adopt zoning laws and other ordinances to clean up these unsightly locations. On the positive side, they may consider preserving old water towers and barns for their historical and picturesque qualities.

The communities that line Route 99 are increasingly demanding that the highway "look good." The Route 99 corridor has the potential to reinforce community identity and establish a sense of entry into these communities.

Planting Types

In the development of California's roadside policy, two types of planting have evolved-"Functional Planting" and "Highway Plant-

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ing." The roadsides along the Route 99 corridor include a mix of these two planting types.

"Functional Planting" is visible between communities, along the rural segments of the Route 99 corridor. As the name indicates, "Functional Planting" is utilitarian and made up most of the original planting along the entire length of the Route 99 corridor. It was comprised of eucalyptus trees used to help delineate the route and identify structures, and oleander shrubs used in the median to shield drivers' eyes from the tiring effect of oncoming headlights. The trees also helped to relieve the monotony in the long stretches of rural freeway. Ground cover vegetation along the rural segments is mainly non-native grasses, planted as erosion control.

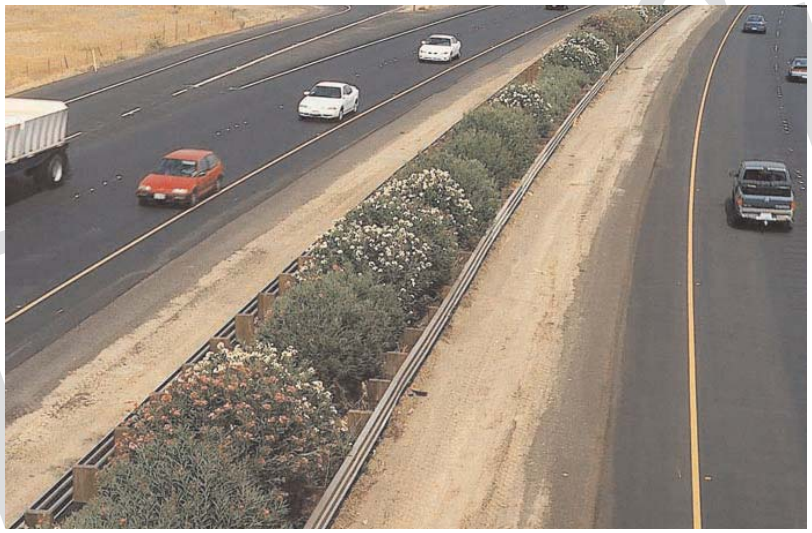


Figure 2-9
Oleander Shrubs in the median on Route

Oleander planting in the median has come to symbolize Route 99 (Figure 2-9). In recent years, many miles of this signature element have been removed. Many more miles have been identified for removal, to help make way for additional lanes of traffic. Throughout the corridor, "Highway Planting" signifies urban areas.

"Highway Planting" goes beyond pure function. It improves aesthetics and makes the roadway more compatible with the surrounding urban environment of neighborhoods and businesses (Figure 2-10). Highway planting includes trees, shrubs, and groundcovers with automatic irrigation systems. Although aesthetic in nature, this landscape also serves many functional purposes, such as controlling dust and erosion, providing fire and weed control, delineating the route, and providing headlight screening (Figure 2-9). Planting is also used to screen objectionable views of adjacent properties, as well as to screen the roadway from the community. In addition, roadside planting can act as a frame for distant vistas.

Roadway improvement projects have affected some of these landscaped areas. However, it is Caltrans policy to restore or replace the landscape following roadway construction projects. Many "Highway Planting" areas along the Route 99 corridor have also exceeded the intended "life-span" for the landscape. Portions of these areas have undergone recent "Landscape Restoration" projects and many more will be upgraded in the future.

2.3 Roadside Management

Controlling litter, weeds, and graffiti along California highways is becoming more and more of a challenge as lane miles and interchanges are added. This is especially true in tight budget times when maintenance must compete with safety and preservation needs. Adequate maintenance of the landscape results from one worker for

Figure 2-10
"Highway Planting" on Route 99

every 15-20 acres. The current statewide average is approximately one worker for 40 acres. Between 1986 and 1997 there has been a 45 percent increase in highway planting areas with a 16 percent decrease in landscape maintenance workers.

Aging highway and roadside facilities, combined with a continued

Figure 2-11
Landscaping on an off-ramp

increase in roadside landscaping, a smaller work force, and increased efforts to control graffiti and litter have reduced the ability of maintenance staff to keep highway facilities in "as built" condition. Many of California's roadsides have continued to deteriorate. Figures 2-11 and 2-12 show good examples of landscaping alongside Route 99.
The creation and retention of a positive highway appearance requires attention to the following issues:

- **Litter collection**

Litter on the roadsides generates some of the highest volume of

EXISTING FACILITIES

complaints from the public and elected officials. Ultimately, roadside litter is a continuing and growing problem with no total solution.

The Adopt-A-Highway program is an alternative to a larger maintenance staff to help combat litter. This is a volunteer program that provides free labor to clean up litter. Along the 99 corridor, this program has been fully implemented in District 6. In Fresno County, the "Association for the Beautification of Highway 99" committee has requested additional volunteer pick-ups, which have been possible through new or renewed permits. Another strategy that has proven effective is the use of prison labor. This is often a collaborative effort with local agencies and provides low-cost labor to help curb the litter problem. The City of Modesto has provided for additional trash pick-ups as well. The Fresno "Association for the Beautification of Highway 99" has also requested stronger enforcement by the CHP of the existing littering laws. Additional signs showing the fines for littering were part of this request.

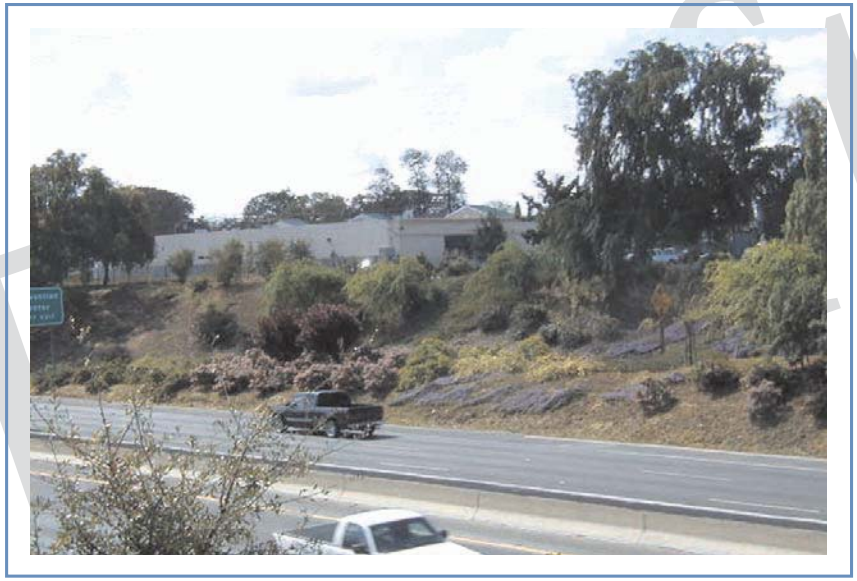


Figure 2-12
Well maintained roadside area on Route

- **Graffiti Control**

Efforts to reduce the visibility of graffiti rely on quick response by maintenance forces. In many areas, Caltrans is experiencing a losing battle in this continuing effort. The only real solution to help deter graffiti is to fully implement the current policy to provide soundwall plantings.

Within the Adopt-A-Highway program, there is an "Adopt-A-Soundwall" element. Again, this is a volunteer program that provides free labor for this activity. This part of the program has not been used along the 99 corridor.

- **Roadside vegetation management (Weed Control)**

Rural roadsides are comprised of non-irrigated vegetation. These roadsides have often been planted with grasses and broad-leaved, non-woody plants for erosion control following roadway construction. This vegetation must be managed to improve the appearance of the roadsides, as well as to maintain sight distances and reduce the risk of fire. Steep slopes that have been constructed at some locations are difficult areas for maintenance workers.

Historically, Caltrans has managed vegetation primarily by mowing and using chemical controls. In 1992, Caltrans adopted a program to reduce the use of chemicals for vegetation management. A 50 percent reduction was met in 2000, with a target of 80 percent reduction by 2012.

- **Maintenance of Highway Planting**

The landscaped freeway, fully planted and irrigated, has become the expected look for urban areas. However, this landscaping requires intensive and ongoing maintenance. The aging roadsides become more difficult to maintain and are in need of significant rehabilitation to bring them up to a level that is maintainable for Caltrans forces.

Landscape Rehabilitation projects are programmed in the State Highway Operation and Protection Program to protect the current investment in roadside improvements. However, they have to compete with roadway operations and safety projects.

Some communities have taken on the maintenance of Caltrans roadsides that pass through their communities. Fresno County was able to do this on Route 168, using Transportation Enhancement Authorization funds. Caltrans will take over the maintenance after the landscaping has been established for four years. These joint efforts are done using either a Coop or a Maintenance Agreement (see Appendix ?)

Highway facilities must be inherently low maintenance with the ongoing maintenance costs balanced against the installation costs. A roadway that is maintained safely and cost effectively is necessary for a visually pleasing highway corridor.

2.4 Environmental Resources

Bound by the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the Coast and Diablo Ranges to the west, the San Joaquin Valley represents a vast geographical area that encompasses diverse natural habitats and a rich cultural heritage. Any physical improvements to the Route 99 Corridor must be developed in a way that protects these unique biological and cultural resources.

Figure 2-13
The San Joaquin Kit Fox

EXISTING FACILITIES

● **Biological Resources**

Route 99 bisects the Valley along its north/south axis and provides travelers with a vista of cultivated fields and orchards, valley grasslands, oak savannas, riverbanks, and fresh water marshes.

Wildlife movement in these areas is critical to the health of the San Joaquin Valley ecosystem. Links between habitats allow species, such as the San Joaquin kit fox, to search for food, escape predators, and move with the seasons. With the intensive agricultural, industrial, and residential development that has occurred up and down the valley over the last century, waterways have become the primary means for animal movement. Route 99 crosses every major river between Stockton and Bakersfield, as well as numerous seasonal streams.

Figure 2-14
The Mammoth Orange at Fairmead

Some of the key components to improving habitat links along these waterways include restoring the natural cycles in riparian (riverbank) systems; eradicating exotic plants; stabilizing stream banks; and restoring stream habitat for aquatic species and migrating birds. The United State's Fish and Wildlife Service also identified the use of wildlife undercrossings as an important factor in the recovery of valley species (Figure 2-13)

● **Cultural Resources**

Traveling Route 99 opens windows into the history of California. Prior to western settlement, California natives known as Yokuts inhabited the valley floor. The Yokuts were the predominant Native American population between Stockton and Bakersfield. Little continuity exists between the valley floor as viewed from Route 99 today and the rich marshlands of the Yokuts. The damming of the rivers and agricultural cultivation have transformed the surface of the land, but valuable clues to the day-to-day lives of the Yokuts still exist beneath today's landscape. Archaeological remains of several village sites may still lay intact in the vicinity of Route 99.

Agriculture and transportation dominate the historic landscape next to Route 99. The Southern Pacific Railroad and later the Santa Fe Railroad and the San Joaquin Railroad provided the Valley with the opportunity to transport goods to the booming

metropolises of Sacramento, San Francisco, and southern California. Many small towns sprung up at stops along the rail lines. Route 99 parallels the railroad tracks for a significant portion of its route. Aging farmhouses and barns in varying stages of decay dot the landscape, providing reminders of settlements reminiscent of the Grapes of Wrath. Many of the barns were used for advertisements during the early 1900s. Remnants of the painted advertisements on barn roofs and sides are still visible from Route 99. Figure 2-14 shows the more recent cultural resource of the Mammoth Orange at Fairmead, an example of a typical hamburger stand that lined Route 99 since the 1950's.

Industrial development along the Route 99 corridor in the San Joaquin Valley threatens to remove or conceal components of the historical landscape. A high density of outdoor advertisement poses a significant threat to the integrity of the historic agricultural landscape.

Chapter 3 covers the long-range plans for highway projects in the future.

CHAPTER 3 FUTURE FACILITY

3.1 Long-Range Plans for Route 99

Existing conditions on Route 99 along with growth and traffic predictions are used to plan for future projects along the corridor. Each future project must balance safety, capacity, and structural needs with the need to protect resources. Chapter 3 describes long-range plans for the Route 99 Corridor.

According to the 1998 Interregional Transportation Strategic Plan and its 2000 Update, the Route 99 standard for the year 2020 ranges from a 4- to 8-lane freeway. This standard applies from south of Bakersfield to the Route 99 junction with Route 70 in Sutter County.

This Strategic Plan recognizes the important role of Route 99 and seeks to:

1) Clear all remaining freeway gaps south of the Route 99/70 junction
2) Add freeway lane capacity to handle increased interregional travel demand for goods movement and major commute volumes

The 2000 Update to the Strategic Plan shows that 24 projects on Route 99 are planned in the corridor area. Sixteen of these are expected by 2008, while eight projects will be completed by 2020.

From the Caltrans perspective, the objective is to complete a six-lane freeway and/or complete the conversion of expressway to freeway by the year 2025 in both Districts 6 and 10. This objective is taken from the Transportation Concept Report for Route 99 in each district (see Section 3.2). In addition, the report proposes improvements to an 8-lane freeway in the urban areas of Bakersfield, Fresno, Modesto, and Stockton. Because of environmental or fixed constraints, however, some urban locations may be limited to 6 lanes plus auxiliary lanes. Even bypasses may be considered in some areas to avoid resources or physical restrictions.

3.2 Projected Operations on Route 99

The Transportation Concept Report is a long-range document that establishes a planning concept for the Route 99 corridor through the year 2025. It defines the appropriate level of service (LOS) target or Concept LOS, as well as facility (roadway) types (Concept Facility) for the route.

Level of Service describes operating conditions on a roadway. Like a report card, the LOS is defined in categories ranging from A-F, with A representing the best traffic flow and F representing the worst congestion. As a general rule, the Concept LOS for Route 99 is D in urban areas and C in rural areas.

See Figures 3-1, 3-2, and 3-3 show respectively for the current (2004) LOS for various segments of Route 99, the predicted LOS for 2025 with appropriate improvements, and the 2025 Concept Facility.


District 6&10
Route 99
CURRENT LOS
2004
To Sacramento
To Los Angeles
LODI
STOCKTON
MANTECA
RIPON
SALIDA
MODESTO
KEYES
CERES
TURLOCK
LIVINGSTON
ATWATER
MERCED
CHOWCHILLA
MADERA
CLOVIS
FRESNO
FOWLER
SELMA
KINGSBURG
GOSHEN
VISALIA
TULARE
TIPTON
PIXLEY
EARLIMART
DELANO
McFARLAND
BAKERSFIELD
KERN
KINGS
MADERA
FRESNO
TULARE
YOSEMITE NAT'L PARK
KINGS CANYON NAT'L PARK
SEQUOIA NAT'L PARK
LEGEND
LOS B
LOS C
LOS D
LOS E

Figure 3-1


District 6&10
Route 99
LOS 2025
(with concept improvements)
To Sacramento
LODI
STOCKTON
MANTECA
RIPON
SALIDA
MODESTO
KEYES
CERES
TURLOCK
LIVINGSTON
ATWATER
MERCED
CHOWCHILLA
MADERA
CLOVIS
FRESNO
FOWLER
SELMA
KINGSBURG
GOSHEN
VISALIA
TULARE
TIPTON
PIXLEY
EARLIMART
DELANO
McFARLAND
BAKERSFIELD
KERN
TAFT
MARICOPA
ARVIN
TEHACHAPI
CALIFORNIA CITY
YOSEMITE NAT'L PARK
SEQUOIA NAT'L PARK
KINGS CANYON NAT'L PARK
MADERA
FRESNO
TULARE
KINGS
MERCED
SAN JOAQUIN
STANISLAUS
10
6
99
LEGEND
LOS C/D
LOS E/F
To Los Angeles

Figure 3-2


District 6&10
Route 99
Facility Concept
2025
To Sacramento
To Los Angeles
LODI
STOCKTON
MANTECA
RIPON
SALIDA
MODESTO
KEYES
CERES
TURLOCK
LIVINGSTON
ATWATER
MERCED
CHOWCHILLA
MADERA
FRESNO
CLOVIS
FOWLER
SELMA
KINGSBURG
GOSHEN
VISALIA
TULARE
TIPTON
PIXLEY
EARLIMART
DELANO
McFARLAND
BAKERSFIELD
KERN
TULARE
KINGS
MADERA
FRESNO
MERCED
SAN JOAQUIN
STANISLAUS
YOSEMITE NAT'L PARK
KINGS CANYON NAT'L PARK
SEQUOIA NAT'L PARK
LEGEND
6 Lane Freeway
6 Lanes + Aux
8 Lane Freeway
8 Lanes + Aux

Figure 3-3

FUTURE FACILITY

The Ultimate Transportation Corridor, or the ultimate roadway needed based on traffic volumes beyond 2025, is an 8-lane freeway. In some locations there may also be a need for:

1) High-Occupancy Vehicle Lanes, to substitute for or to supplement the 8-lane freeway, especially in urban areas
2) Weaving lanes, especially in urban areas

Not withstanding the natural or political environment, the particular ultimate roadway acceptable on a respective portion of Route 99 will be based on traffic volumes or unique traffic operations.

3.3 Capacity Improvements and Needs

The "State Highway 99 Report on Transportation Needs on State Route 99 between Bakersfield and Sacramento" (May 2002), which was requested by Senate Concurrent Resolution 17, outlines projects for Route 99 that are planned for the next 20 years or funded to be built within the next 10 years. This section covers only those projects in the area covered by the Route 99 Corridor Master Plan. Table 3.1 shows "Full or Partially Funded Projects-Identified Improvement Needs" along the corridor. Table 3.2 shows "Unfunded Projects from State, Regional and Local Plans." These tables will be updated as appropriate to reflect the current status of state, regional, and local plans, as well as documents such as the State Transportation Improvement Program. Figure 3-4 shows the general locations of the Planned and Programmed Projects along State Route 99, including those in Sacramento and Sutter counties.

Project Location						Project Details		Project Funded
County	Route	Post-mile back	Post-mile ahead	From	To	Project Description	Project Source	Amount Funded (millions $)
State Transportation Improvement Program (STIP) and Transportation Congestion Relief Program (TCRP) Projects								
STIP Projects (Full or Partially-Funded)								
TUL	99	30.6	30.6	Prosperity Ave. Interchange		Modify interchange	STIP	1.48
TUL/FRE	99	TUL 41.3; FRE 0.0	TUL 53.9; FRE 1.0	North Goshen Overhead	SR201	Widen 4F to 6F	STIP	2.2
FRE	99	1.0	7.1	SR201	.7 mi north of SR43	Widen 4F to 6F	STIP	0.43
MAD	99	8.9	10.4	South of Gateway Dr.	North of S. Madera Overcrossing & SR99/SR145 interchange	Modify interchanges	STIP	3.9
MAD	99	20.1	22.5	2.5 mi south of SR152	Fairmead (SR152)	Convert 4E to 4F with interchange at Ave. 22	STIP	7.1
MER	99	0.0	4.6	Madera/Merced County line	Buchanan Hollow Rd.	Convert 4E to 4F	STIP	1.49
MER	99	4.6	11.0	Buchanan Hollow Rd	Healy Rd.	Convert 4E to 6F	STIP	28.18
MER	99	10.6	12.8	McHenry Rd	.4 km south of Childs Ave	Convert 4E to 6F	STIP	66.68
MER	99	23.8	26.8	.5 km north of Atwater OH	Arena Way	Convert 4E to 4F and construct interchange at Westside Blvd.	STIP	36.08
MER	99	26.8	28.6	Arena Way	North of Dwight Way	Convert 4E to 4F and construct interchange at Sultana Dr	STIP	29.57
STA	99	11.9		SR99/Whitmore Ave		Construct overcrossing	STIP	8.14
STA	99	21.5	22	SR99/Pelandale Ave Interchange		Reconstruct interchange	STIP	0.55
SJ	99	6.4	7.0	SR99/SR120 Interchange		Widen SR120 through interchange area & reconstruct the SR99 ovelrhead and on/off ramps	STIP	0.408
SJ	99	14.3	16.7	Arch Rd.		Construct interchange	STIP	14.36
SJ	99	15	18.6	.6 km north of of Arch Rd	.2 km south of SR4 (west)	Widen 4F to 6F (2000 STIP)	STIP	1.6
SJ	99	18.6	22.9	SR4 (west)	Hammer Ln.	Widen 4F to 6F & modify interchange (1998 STIP)	STIP	17.16
SJ	99	22.8	23	Hammer Ln Interchange		Modify interchange	STIP	5.38
						TOTAL STIP PROJECTS		**$224.71**
Traffic Congestion Relief Program (TCRP) Projects								
KER	99	30.5	30.5	SR99/7th Standard Rd. Interchange		Improve interchange	TCRP	8
TUL	99	41.1	41.1	Goshen		Construct overpass	TCRP	1.5
FRE	99	0.9	6.4	City of Kingsburg (SR201)	City of Selma (SR 43)	Widen 4F to 6F	TCRP	20
FRE	99	28.1	28.1	SR99/Shaw Ave. Interchange	SR99/Shaw Ave. Interchange	Improve interchange	TCRP TCRP	5
MER	99	0.0	4.6	Madera/Merced County line	Buchanan Hollow Rd.	Convert 4E to 6F	TCRP	5
MER	99	4.6	11.0	Buchanan Hollow Rd.	Healey Rd.	Convert 4E to 6F	TCRP	5
ST	99/132	16.1	16.1	SR99/SR132 Interchange		Improve interchange	TCRP	$12 m to improvements on SR132 &SR99/SR132 interchange-amount not included in SR99 total
						TOTAL TCRP PROJECTS		**$44.50**
						SUB-TOTAL (STIP & TCRP PROJECTS)		**$269.21**

Figure 3-4

Project Location						Project Details		Project Funded
County	Route	Post-mile back	Post-mile ahead	From	To	Project Description	Project Source	Amount Funded (millions $)
2002 Interregional Transportation Improvement Program (ITIP) Projects								
TUL	99	30.6	41.3	Prosperity Ave. Overcrossing	North Goshen Overhead	Widen 4F to 6F	ITIP	1.6
FRE	99	1.0	7.1	SR201	SR43	Widen 4F to 6F	ITIP	36.39
MAD	99	20.1	22.5	Appx. 2.5 mi south of SR152	Fairmead (SR152)	Convert 4E to 6F with interchange at Ave. 22	ITIP	47.66
MER	99	0.0	4.6	Madera/Merced County line	Buchanan Hollow Rd.	Convert 4E to 6F	ITIP	19.16
MER	99	23.8	26.8	.5 km north of Atwater OH	Arena Way	Convert 4E to 4F and construct interchange at Westside Blvd.	ITIP	41.25
MER	99	26.8	28.6	Arena Way	North of Dwight Way	Convert 4E to 4F and construct interchange at Sultana Dr	ITIP	36.64
SJ	99	18.6	22.9	SR4 (west)	Hammer Ln.	Widen 4F to 6F	ITIP	23.88
						TOTAL ITIP PROJECTS		$206.58
							GRAND TOTAL	**$475.79**

Figure 3-5

Project Location						Project Details	
County	Route	Post-mile back	Post-mile ahead	From	To	Project Description	Project Source
Unfunded Projects from State, Regional and Local Plans							
KERN COUNTY							
KER	99	18.5	22.6	I mi. south of Panama Ln.	Ming Ave.	Widen 6F to 8F	Unspec. plng. doc. or other identified need
KER	99	20.8	21.7	White Ln. Interchange		Modify interchange	Unspec. plng. doc. or other identified need
KER	99	22.7	24.7	SR58/SR99 Interchange		Auxiliary lanes	SHOPP
KER	99	19.5	27.9	Various ramps in Bakersfield		Ramp metering	SHOPP
KER	99	R29.9	36.5	SR65/SR99 Interchange	Lerdo Hwy.	Widen 6F to 8F	Focus Track
KER	99	49.4	57.8	Sherwood Ave.	Kern/Tulare County line	Widen 6F to 8F	Focus Track
KER	99	54.5	57.6	Woollomes Ave	Kern/Tulare County line	Ramp upgrades	RTP
TULARE COUNTY							
TUL	99	0	9.2	Kern/Tulare County line	Ave. 72	Widen 4F to 6F	Focus Track
TUL		9.2	18.4	Ave. 72	SR190	Widen 4F to 6F	Focus Track
TUL	99	18.4	26.1	SR190	Airport Overcrossing	Widen 4F to 6F	Focus Track
TUL		26.1	30.6	Airport Overcrossing	Prosperity Ave. Overcrossing	Widen 4F to 6F	Focus Track
TUL	99	25.4	27.6	Paige Ave. Interchange		Modify interchange	RTP
TUL	99	31.7	31.7	Cartmill Ave. Interchange		Modify interchange	RTP
TUL	99	36.4	36.4	Caldwell Rd. Interchange		Modify interchange	Unspec. plng. doc. or other identified need
TUL	99	40.9	40.9	Betty Dr. Overcrossing		Pedestrian overcrossing	Unspec. plng. doc. or other identified need
TUL	99	41.3	41.3	At Betty Dr.		Construct interchange	RTP

Project Location						Project Details	
County	Route	Post-mile back	Post-mile ahead	From	To	Project Description	Project Source
Unfunded Projects from State, Regional and Local Plans							
FRESNO COUNTY							
FRE	99	9.2	12.2	Manning Ave.	Clovis Ave.	Widen 6F to 8F	RTP
FRE	99	12.2	16.9	Clovis Ave.	Cedar Ave.	Widen 6F to 8F	RTP
FRE	99	16.9	18.3	Cedar Ave.	Jensen Ave.	Widen 6F to 8F	RTP
FRE	99	14.5		At American Ave.		New interchange	RTP
FRE	99	16	30.3	Various ramps along SR99		Ramp meters	SHOPP
FRE	99	18.5	20.2	Jensen Ave	SR41	Construct aux. lane	Focus Track
FRE	99	20.7	24.4	Fresno St.	Clinton Ave.	Northbound & southbound auxiliary lanes	SHOPP
FRE	99	19.3	22.7	SR41	Belmont Ave.	Widen 6F to 8F	Focus Track
FRE	99	16.9	31.5	Cedar Ave.	Fresno/Madera County line	Fiber optics and HAR	SHOPP
FRE	99	24.9	24.9	At Shields Ave.		Const. overcrossing	RTP
FRE	99	30.2	30.2	At Grantland Ave.		Construct interchange	Focus Track
FRE/MAD	99	FRE 25.6	MAD 1.0	Ashlan Ave. Ave. 7		Widen 4F to 6F	RTP
MADERA COUNTY							
MAD	99	1	10.5	Fresno/Madera County line	SR145	Widen 4F to 6F	Focus Track
MAD	99	7.5	7.5	At Ave. 12		Improve ramps	Unspec. plng. doc. or other identified need
MAD	99	10.5	12.8	SR145	Ave. 16	Widen 4F to 6F	Focus Track
MAD	99	12.8	20.4	Ave. 16	Ave 21 1/2	Widen 4F to 6F	Sys.Plng.Docs.
MAD	99	22.5		SR99/SR152 interchange		Modify interchange	Unspec. plng. doc. or other identified need
MAD	99	24.4		At Ave. 12		Modify overcrossing	Unspec. plng. doc. or other identified need
MAD	99	22.5	29.3	SR152	Madera/Merced County line	Widen 4F to 6F	Sys.Plng.Docs.
MAD	99	26.5		SR99/SR233 Interchange		Operational improvements to ramps (short-term)	Unspec. plng. doc. or other identified need
MAD	99	26.5		SR99/SR233 Interchange		Modify interchange (long-term)	Unspec. plng. doc. or other identified need
MERCED COUNTY							
MER	99	12.8	15.6	Childs Ave	SR99/SR140 Interchange	Convert 4F to 6F & modify interchanges	Focus Track
MER	99	14.6		SR59/SR99 Interchange		Modify interchange	RTP
MER	99	13.6	14	SR99/SR140 Interchange		Modify interchange	RTP
MER	99	15.6	21.6	V St.	East of Atwater Overhead	Widen 4F to 6F	RTP
MER	99	21.6	23.8	East of Atwater	North of Atwater Overhead	Widen 4F to 6F through Atwater	RTP
MER	99	28.6	32.3	North of Dwight Way	North of Collier Rd Undercrossing	Widen 4F to 6F	RTP
MER	99	32.3	R36.4	North of Collier Rd Undercrossing	South of Turlock Overcrossing	Widen 4F to 6F	RTP
MER/STA	99	MER 36.4	STA 4.6	South of Turlock Overcrossing	North of Fulkerth Rd	Widen 6F to 8F (long-term)	Focus Track
MER	99	19	19	Bellevue Rd.		New interchange on 99	RTP
STANISLAUS COUNTY							
STA	99	0	R10.9	Merced/Stanislaus County line	City of Ceres	Widen 6F to 8F	Unspec. plng. doc. or other identified need
STA	99	1.6	1.6	SR99/Lander Interchange		Modify interchange	Unspec. plng. doc. or other identified need
STA	99	3.3	3.7	W. Main St.		Reconstruct interchange	Other
STA	99	3.5	3.5	SR99/W. Main St. Interchange		Modify interchange	Unspec. plng. doc. or other identified need

Figure 3-6

Project Location						Project Details	
County	Route	Post-mile back	Post-mile ahead	From	To	Project Description	Project Source
Unfunded Projects from State, Regional and Local Plans							
STANISLAUS COUNTY							
STA	99	4.6	8.2	Fulkerth Rd	North of Keyes Rd	Widen 6F to 8F	Focus Track
STA	99	R5.6	R5.6	Monte Vista Ave. Undercrossing		Modify interchange	SHOPP
STA	99	R6.8	R9.7	Taylor Rd. Undercrossing	1.6 km Faith Home Rd. Overcrossing	Median barrier, CMS, CCTV, weather stations & TMS	SHOPP
STA	99	R10.9	R22.6	Ceres	SR219	Widen 6F to 8F	Unspec. plng. doc. or other identified need
STA	99	R11.5	R11.9	Mitchell Rd.		Modify interchange	Other
STA	99	R13.3		Hatch Rd. Overcrossing		Construct interchange	Unspec. plng. doc. or other identified need
STA	99	13.5	13.5	SR99/Hatch Rd. Interchange (southbound off-ramp)		Install signal	Other
STA	132	R11.1	R14.7	SR99/SR132 Interchange		Modify interchange	RTP
STA	99	20.22	20.22	Beckwith Rd. Overcrossing		Construct interchange	Unspec. plng. doc. or other identified need
STA	99	22.6	22.6	SR219 (Kiernan Rd.)		Modify interchange	Unspec. plng. doc. or other identified need
STA	99	18.37	18.37	Briggsmore Overcrossing		Construct interchange	Unspec. plng. doc. or other identified need
SAN JOAQUIN COUNTY							
SJ	99	1		Olive Road		Construct overhead and overcrossing	Unspec. plng. doc. or other identified need
SJ	99	1.7	6.2	Milgeo Ave Moffat		Widen 6F to 8F	RTP
SJ	99	5.3	14.6	SR120 Arch Rd		Widen 4F to 6F	RTP
SJ	99	6.2	12.9	Moffat So.Stockton		Widen 4F to 6F	Focus Track
SJ	99	6.2	12.9	Moffat So.Stockton		Widen 6F to 8F	Focus Track
SJ	99	15	18.6	Arch Road Crosstown		Widen 6F to 8F	RTP
SJ	99	16.7	17.2	SR99/Mariposa Rd. and Farmington Rd. Interchanges		Reconstruct and combine interchanges (Stages 1 & 2)	RTP
SJ	99	18.6	22.8	SR4	Hammer Ln.	Widen 6F to 8F (long term)	RTP
SJ		21.1	22.1	Calaveras River Underpass	Calaveras River Overcrossing Bridge	SR99/March Ln./Wilson Wy - Construct new IC	RTP
SJ	99	24		Morada Ln.		Modify interchange	Unspec. plng. doc. or other identified need
SJ	99	25.4	25.4	SR99/Eight Mile Rd. Interchange		Reconstruct interchange	RTP
SJ	99	25.4	26.8	Eight Mile Rd. South of Live Oak Canal		Widen 4F to 6F	Focus Track
SJ	99	28.7	31	N/O Harney Ln. East Lockford St.		Widen 4F to 6F	Focus Track
SJ	99	31.9	38.8	North of Lodi San Joaquin/Sacramento County line		Widen 4F to 6F	Focus Track

List of Abbreviations

RTP	Regional Transportation Plan
CMP	Congestion Management Program
SHOPP	State Highway Oprerations & Protection Plan

System Planning Documents

TSDP	Transportation System Development Program
DSMP	District System Management Plan
TOPS	Traffic Operations Planning Strategies

Figure 3-7

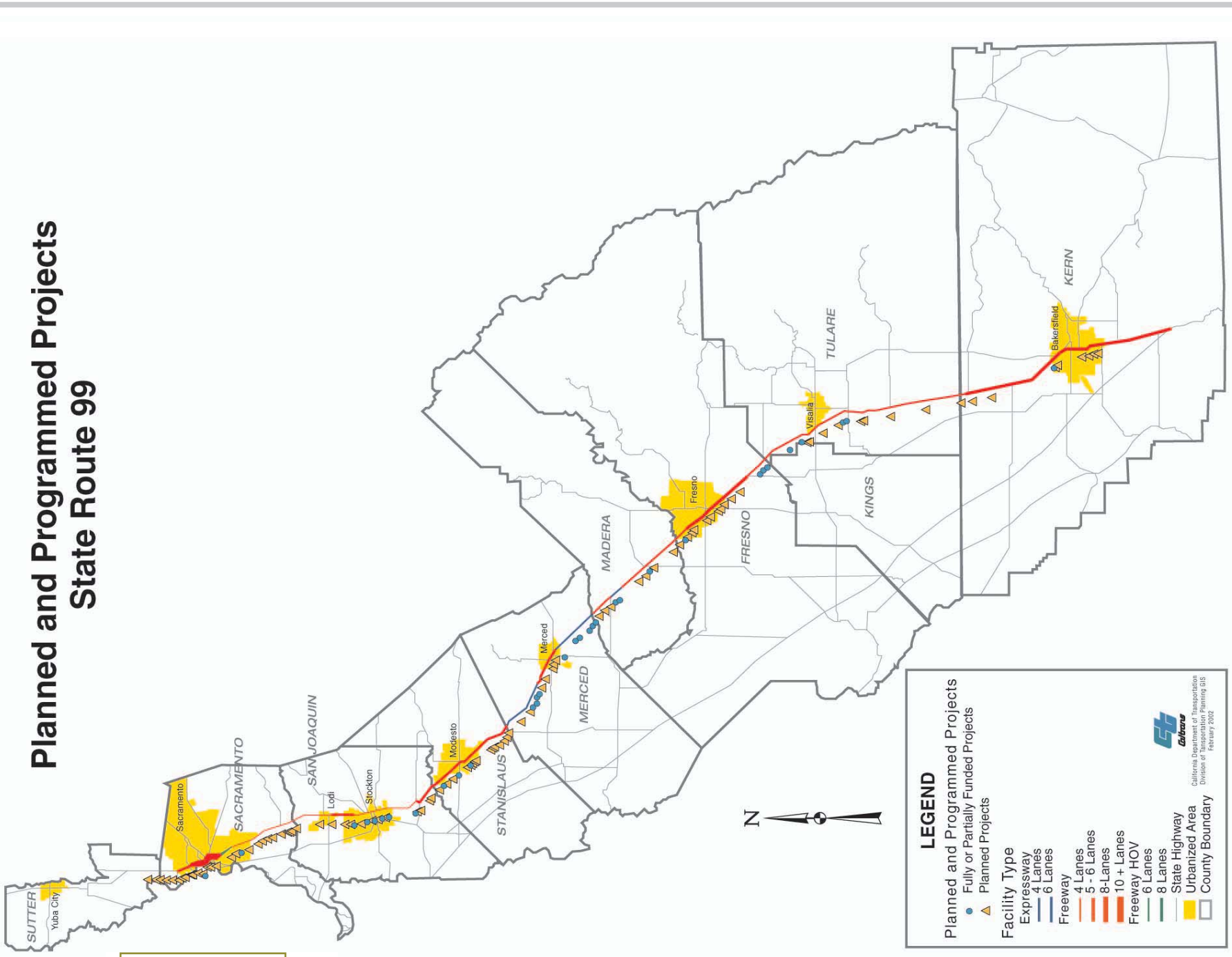

Planned and Programmed Projects
State Route 99
SUTTER
Yuba City
SACRAMENTO
Sacramento
SAN JOAQUIN
Lodi
Stockton
STANISLAUS
Modesto
MERCED
Merced
MADERA
FRESNO
Fresno
KINGS
TULARE
Visalia
KERN
Bakersfield
N
LEGEND
Planned and Programmed Projects
Fully or Partially Funded Projects
Planned Projects
Facility Type
Expressway
4 Lanes
6 Lanes
Freeway
4 Lanes
5 - 6 Lanes
8-Lanes
10 + Lanes
Freeway HOV
6 Lanes
8 Lanes
State Highway
Urbanized Area
County Boundary
California Department of Transportation
Division of Transportation Planning GIS
February 2002

Figure 3-8

FUTURE FACILITY

3.4 Maintenance Needs

The 10-year State Highway Operation and Protection Plan (SHOPP) defines long-range system needs.

The plan is estimated to cost 22 billion dollars statewide and is updated annually for presentation to the California Transportation Commission. The primary categories covered by the plan are Roadway Preservation and Mobility. Roadway Preservation addresses distressed pavement, storm damage, and signs and lighting. Mobility deals with congestion and truck safety. The plan is comprehensive and identifies the need for safety projects, pavement restoration, and landscaping. It also identifies other preservation projects and replacement of existing roadways, bridges, and maintenance and operational facilities.

The most current ten-year SHOPP plan is dated April 4, 2002. It is on the Caltrans Web site under "Doing business with Caltrans" at http://www.dot.ca.gov/hq/transprog/shopp.htm. For specific SHOPP projects on Ropute 99 for each of the next four fiscal years (2003/04-2006/07), please refer to the same Web site.

Demands on the system are accelerating because of new laws and regulations and the pace of deterioration, which has increased because of deferred work. The SHOPP is realistic in its assessment of both the existing system and projected traffic impacts on the system. As the current system ages and traffic projections materialize, there will be an opportunity to make significant improvements to the system. Much of the need is within urban areas that cost more to improve. In addition, public expectations include adding aesthetic improvements at community gateways and other sensitive locations.

3.5 Managing Congestion

Transportation Systems Management includes a host of methods to attack traffic congestion problems. The more common transportation systems are listed below:

- **High Occupancy Vehicle (HOV) Lanes**

HOV lanes are used primarily in urban areas where traffic congestion is prevalent, particularly during commuter travel times. These are lanes reserved for carpools and transit that allow for a higher capacity, more efficient movement of traffic. There is a study underway called the San Joaquin Valley HOV Study, which analyzes the feasibility of HOV lanes in Districts 6 and 10, including along Route 99.

- **Auxiliary Lanes**

Auxiliary lanes are used as extra lanes on freeways where there is minimum spacing between interchanges. They serve to accommodate traffic entering the freeway and through traffic that is leaving the freeway at the next interchange. Auxiliary lanes improve the overall operations of a roadway. They have been included on the newer Route 99 construction projects in urban areas with large traffic volumes.

FUTURE FACILITY

- **Park and Ride Lots**

Park and ride lots are generally private or state-sponsored formal parking lots that enable travelers, particularly commuters and recreational visitors, to park at a congregating place to carpool or take transit to their destination. There are currently _10 existing park and ride lots along Route 99, two in Kern County, six in San Joaquin County, and two in San Joaquin County. Park and ride lots will be developed in the future as needed along the corridor.

- **Intelligent Transportation Systems**

Intelligent transportation systems (ITS) are being used more every day as technology and funding provide the means to improve safety and traffic operations. The Intermodal Surface Transportation Efficiency Act has successfully used several systems to eliminate traffic congestion problems. We now take information systems for granted that were under debate only a decade ago. Examples of existing ITS technology along Route 99 include Highway Advisory radio stations and weather stations.

Caltrans is also using Traffic Management Centers that employ cameras and sensors to determine what is happening at bottlenecks and critical decision points on the highway system. These centers use Changeable Message Systems, Closed Circuit TV cameras, and Traffic Monitoring Stations to serve the traveling public and freight operators. Newly installed fiber optic cables link these systems together and Caltrans continues to add these buried cables on current projects to better connect existing facilities. In addition, remote control devices make the systems more precise and more responsive to the Traffic Management Center.

Figure 3-10
Traffic Management Center

Commercial entities are being built in the form of Information Service Providers known as ISPs. These ISPs provide value-added services, by collecting data from various sources and creating information products and services that consumers now see as necessary as their TV, online computer, and telephone. Services that are currently being offered include electronic toll payment, driver and traveler services, and emergency services. These services are expected to improve in the immediate future and provide route information, transit schedules and connections, trip planning data, and information on accidents, earthquakes, fires, or other incidents that affect traffic.

3.6 Rest Areas

In 2000, a new "Caltrans Safety Roadside Rest Area System Master Plan" was approved. A priority was placed on identifying new rest area sites that best address the trucking industry needs for safe stopping and rest. In this new Master Plan, five new sites have been identified for the Route 99 corridor (See Figure 2-8 in Chapter 2). These will help to alleviate the current shortage.

The existing Safety Roadside Rest Areas are in need of major renovation and upgrades to sustain the high levels of use and to comply with the Americans with Disabilities Act requirements. The renovation of Enoch Christofferson is under construction now. The C. H. Warlow facility is funded and in the design development phase. The rehabilitation of Phillip S. Raine has been included in the "10-year State Highway Operation and Protection Plan" for District 6.

New Safety Roadside Rest Areas may be developed through solicitation of a joint-development, privatized effort. It is hoped that public funding can be leveraged through this process to maximize the availability and quality of safe roadside stopping opportunities.

Caltrans provision for rest stops promotes traffic safety and serves the Department's goal to promote efficient goods movement for California's economic vitality.

Chapter 4 addresses the Route 99 Corridor Theme and how the State and local agencies can work together to improve the appearance and image of the corridor.

CHAPTER 4 DEVELOPING A CORRIDOR THEME

4.1 Context Sensitive Solutions and Aesthetics

Aesthetics must be considered in the highway project planning and design process. The development of transportation design elelments must be responsive to local values and concerns. The various elements need to provide corridor consistency while enhancing individual community identity.

Improving the appearance and image of the corridor is a primary goal of the Route 99 Corridor Master Plan. Caltrans will be responsible for design features and landscaping within the Route 99 right-of-way, while local agencies will be responsible for standards in the viewshed beyond the right-of-way, which has an influence on the perception of the community and travelers. Aesthetics must be considered in the highway project planning and design process. The development of transportation design elements must be responsive to local values and concerns. The various elements need to provide corridor consistency while enhancing individual community identity.

This is accomplished by the methodology of "Context Sensitive Solutions," which uses "innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance and performance goals". Context sensitive solutions are reached "through a collaborative, interdiciplinary approach involving all stakeholders". An emphasis must be placed on improving the boundary between the transportation corridor and the communities and people next to the highway. According to the Project Development Procedures Manual: " A reasonable additional expenditure is justified to aesthetically enhance transportation projects". (PDPM Chapter 29, Part 3, Section 5 - Aesthetics)

Typically, urban portions of Route 99 are landscaped and rural portions are not. Rural areas will, for the most part, make the most of the valley's natural beauty: the changing of season, the natural vistas, and the rich farmland. The Route 99 Corridor Master Plan Advisory Committee, along with the Route 99 Task Force from the Great Valley Center, recommended that consistency and unity in the appearance and image of the Route 99 corridor can be enhanced through the application of a Corridor Theme. Section 4.2 describes what this corridor theme is, how it was developed, who was involved in the theme development, as well as ideas on how it may be implemented by Caltrans and local agencies alike.

4.2 Developing the Corridor Theme

In collaboration with select members of the Route 99 Task Force of the Great Valley Center, Caltrans facilitated the task of establishing a theme for the Route 99 Corridor. The Task Force members represented local agencies from Kern County in the south through San Joaquin County in the north, along with various Caltrans functional representatives and the Great Valley Center.

It was an iterative process where the group first met twice in November/December of 2003. Initial comments at these meetings were solicited through a "Route 99 Corridor Master

Plan Theme Concept Survey". The group members were encouraged to write down elements along the corridor that would represent it in a positive manner, and then to write down a phrase that encompasses these elements. Examples of initial theme comment groupings were: Mainstreet, Agriculture, Valleyscapes and Valley Heritage.

From these theme comment groupings, Caltrans then took another survey where the members were asked to vote on their favorite components of the theme, consisting of the identifier i.e. Route 99, Highway 99; a title for Route 99 i.e. California's Main Street, California's Heartland Highway, Heritage Highway, and a catch phrase i.e.linking California's heritage and innovation, California's Working Landscape, Artery of the heartland. Although there were an array of possible themes that could be established, the consensus theme agreed upon was "Route 99-The Mainstreet of California's Heartland-linking heritage to innovation". This theme was validated by all members of the Route 99 Task Force at the January, 2004 regular meeting.

The theme is advisory to Caltrans and local agencies to establishing unified, aesthetically pleasing design features and landscaping that would be incorporated into highway projects within Caltrans right-of-way. This would create an identity for that portion of the Route 99 corridor, and the local agency may then want to establish an integration of the theme outside the right-of-way for further theme continuity and to influence the viewshed. The theme can be developed and strengthened by the careful selection of enhancement treatments. Section 4.3 outlines what Caltrans responsibilities and authority would likely be upon implementation of the Route 99 Corridor Theme, as well suggested local agency responsibilities and authority that could complement and enhance the Caltrans efforts.

4.3 Roles and Responsibilities for Corridor Theme Coordination-State and Local

4.3.1 State Involvement

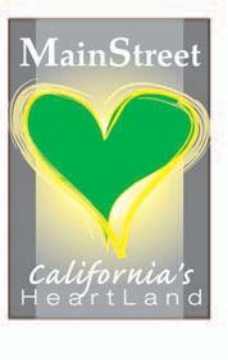
As the Caltrans lead responsibility for design of the State highway roadside, the Landscape Architecture Department seeks to "balance mobility needs with local community values, adjacent land use, and scenic, cultural, historic and environmental resources". Traveler and worker safety are two other high priorities. The landscape architects also provide design expertise to protect and improve aesthetic resources along the State highway. They are also charged with including aesthetic features in a project for the purpose of integrating transportation improvements into their surroundings, including special treatment for bridges, median barriers, walls, and pavement.

Caltrans will facilitate the integration of the Route 99 Corridor Theme into any future project improvements on Route 99 or for the existing highway. Several Caltrans functional units and select local agencies, including the District Landscape Architect, will comprise the Route 99 Corridor Advisory Committee; this body

ROUTE 99 CORRIDOR THEME

will rule upon the appropriate application of the theme for project implementation. Caltrans only has authority within the Route 99 right-of-way but has an advisory role only on adjoining local jurisdiction aesthetic issues. In working on Corridor Theme implementation, Caltrans or the Advisory Committee will work with the Local County or City Beautification Committee, construction contractors, council persons or County supervisors or other entity given aesthetic treatment responsibility.

In the following are ILLUSTRATIONS ONLY of possible signs that may depict the Corridor Theme on Route 99.



The Caltrans landscape architects are involved with the following highway aesthetic programs, as indicated in the Caltrans Project Development Procedures Manual (PDPM):

- **HIGHWAY PLANTING:** Chapter 29, Section 2-Landscape Architecture of the Project Development Procedures Manual (PDPM). Policy: the Department does planting on State highways where safety and environmental requirements dictate, along with providing visual aesthetic integration of the facility within the existing environs. Highway planting consists of new highway planting, replacement highway planting, highway planting restoration, highway planting revegetation, required mitigation planting, and irrigation system upgrade work.

- **TRANSPORTATION ART:** Chapter 29, Section 6-Landscape Architecture of the Project Development Procedures Manual (PDPM). Policy: the Department will encourage and promote enrichment of the cultural and visual environment for transportation system users and local communities by facilitating and coordinating the placement of artwork by others, within the State highway right-of-way, through the encroachment permit process.

- **COMMUNITY IDENTIFICATION:** Chapter 29, Section 8-Landscape Architecture of PDPM. Policy: the Department will encourage and promote enrichment of the cultural and visual environment for transportation system users and local communities by using a collaborative approach to facilitate and coordinate the integration of community identification within the State highway right-of-way. Community identification is defined as images or text that conveys information about a region, community or area. A Community Identifier is handled through

the encroachment permit process.

- **GATEWAY MONUMENTS:** Chapter 29, Section 9-Landscape Architecture of PDPM. The Department is authorized to approve gateway monuments for installation within State rights of way. The pilot program shall terminate on January 1, 2008. A gateway monument is defined as any freestanding structure or sign, not integral to highway facilities, that communicates the name of a region, community or area. A Gateway Monument is authorized through the encroachment permit process.

The above sections of Chapter 29 of the PDPM are shown in Appendix 1.

4.3.2 Local Involvement

While the State has jurisdiction over the Route 99 highway right of way, the local jurisdictions (City, County or other public jurisdiction) have control over the use and appearance of the land adjacent to Route 99 (or outside of the right of way). Land use regulations, development standards, signage regulations, and incentives/educational means to improve vistas and viewsheds, are primary measures to attain better compatibility with the Route 99 theme and to draw the traveler to a more attractive, economically viable community. In the following are examples, and not an inclusive list, of each of these measures, many which are extracted from the Route 99 Corridor Improvement Guide, prepared by the Highway 99 Task Force of the Great Valley Center.

LAND USE REGULATIONS

A County or City has within its statutory powers to develop a General Plan that would layout the blueprint for the types and densities of land uses for the future, usually for 20-25 years. This is possible for the land alongside Route 99, whether it be the desire for an intense urban corridor, a scenic landscape or mixed uses. Along with General Plan, which gives the macro or greatest level of implementation, other implementing tools to control land use compatibility, and to achieve thematic integrity to Route 99, are:

1) ZONING-this basically indicates the type(s) of land uses that are permissible in specific areas or zones. A community can desire to create a scenic corridor along Route 99, thereby preserving a viewshed or permitting a more pleasant driving experience. Or it can allow only uses deemed compatible along a highway i.e. commercial. Zoning laws can limit the height of buildings, and overlay zoning places additional restrictions on zoned areas and is often used to control density, grading, ridgeline development and vegetation. View corridors are planned openings in the built environment that allow views of scenic vistas.

2) LAND PURCHASE-Among the more expensive options, land purchase is sometimes the only way to protect scenic vistas and viewsheds permanently from development. A land trust uses

funds to purchase threatened land for the benefit of the public.

3) TRANSFER OF DEVELOPMENT RIGHTS (TDR)- This is an alternative strategy to purchasing land. TDRs preserve scenic areas by transferring, or "sending," development rights from sensitive lands to "receiving" areas marked for growth.

DEVELOPMENT STANDARDS

Whether development is existing or new construction is pending, the local jurisdiction can control or mitigate how the development will interface with Route 99. In the following are examples of how this may be done.

1) If existing buildings do not fit in with the corridor, a planting program may be instituted or sound walls may be built if noise is a problem. Landscaping and public art on or along the wall would benefit the corridor.
2) For new building construction, a design review board could rule on design guidelines such as height, size, architectural style, color, siting and more. The building design and placement may attenuate noise from Route 99 and can create a more interesting appearance from the highway.
3) Buildings, new or old, could use noise attenuation material.

SIGN AND BILLBOARD REGULATIONS

The local jurisdiction can control existing signage along Route 99, as well as influence what new signage occurs, in several ways. First, fees can be established for new or existing signs, which would cover the jurisdiction cost of controlling them ie. Billboards and/or impact the profitability of these signs. Second, the standards of the signs could be raised, which would limit aspects of signage i.e. animated, revolving, large size. Alternative smaller, less obtrusive signs might be more attractive. Finally, the prohibition of signage, notably billboards, may be needed to reduce billboards in the community.

To ensure the protection and management of scenic vistas and viewsheds from Route 99, the local jurisdiction can conduct a visual assessment of the assets and liabilities that a community has to offer. It is done to identify what is at risk in the community, as well as to manage growth. Following the visual assessment, the citizens can be educated on the importance of scenic vistas and viewsheds to the community's quality of life.

Chapter 5 covers how Caltrans can implement the Corridor theme via the highway asthetic programs with local jurisdications.

CHAPTER 5 IMPLEMENTING THE PLAN

5.1 Project Development Process

Community involvement must be an integral part of the project development process. Once themes have been identified, local and State officials can prioritize, program, and develop proposed projects.

Chapter 5 encourages local agencies to use this master plan as a guide towards implementing a cohesive corridor design. Community themes, in collaboration with the concepts set forth in this Master Plan and the Route 99 Corridor Theme, should express the corridors unique character. Specific colors, textures, and planting material can be used to express community themes to highway travelers

Many theme or aesthetic features, if implemented early, can be added to the project with minor increases in cost. Aesthetic features may include textured paving added to extended gores and concrete bridge slopes, retaining wall, soundwall and bridge textures, pedestrian fence treatments and lighting. Features such as enhanced planting, gateway monuments, community identifiers, and highway art may be added with community contributions and maintenance agreements. See Section 5.3 - Roadside Elements for more information regarding aesthetic features.

Community involvement must be an integral part of the project development process. Once themes have been identified, local and State officials can prioritize, program, and develop proposed projects. Caltrans' project development philosophy is to consider economic, social, and environmental effects in order to make project decisions in the best interest of the public. The project development process usually begins after a transportation need has been identified. The project initiation document starts the process leading to programming of funds.

Figure 5.1 delineates the Project Development Process:Caltrans functional representatives and the Great Valley Center.

The project development process spans that period of time that begins with feasibility studies and ends with the completion of construction. The development process is tied to the legal requirements of environmental laws and regulations; it melds engineering requirements and Caltrans' management approval steps with the environmental process.

Corridor master plan implementation should occur during all phases of the project development process. Early involvement is essential to implement aesthetic elements on roadway projects. Having a corridor plan already in place is of great value during the project initiation process.

IMPLEMENTING THE PLAN

Project Development Process

PHASE I: **Project Initiation Document**

- Develop Alternatives
- Scope
- Cost
- Schedule

PHASE II: **Project Approval and Environmental Document**

- Select Alternatives

Approve:

- Scope
- Cost
- Schedule
- Env. Doc.

PHASE III: **Construction Contract Documents**

Prepare:

- Plans
- Specification
- Estimate

PHASE IV: **Construction**

- Advertise
- Award
- Approve
- Build

ROUTE 99 CORRIDOR MASTER PLAN IMPLEMENTATION SHOULD OCCUR DURING ALL PHASES OF THE PROCESS

Easy ⇦ **CHANGE** ⇨ ***Difficult***

5.1.1 Phase I: Project Initiation

will rule upon the appropriate application of the theme for project implementation. Caltrans only has authority within the Route 99 right-of-way but has an advisory role only on adjoining local jurisdiction aesthetic issues. In working on Corridor Theme implementation, Caltrans or the Advisory Committee will work with the Local County or City Beautification Committee, construction contractors, council persons or County supervisors or other entity given aesthetic treatment responsibility.

The Caltrans landscape architects are involved with the following highway aesthetic programs, as indicated in the Caltrans Project Development Procedures Manual (PDPM):

- **HIGHWAY PLANTING:** Chapter 29, Section 2-Landscape Architecture of the Project Development Procedures Manual (PDPM). Policy: the Department does planting on State highways where safety and environmental requirements dictate, along with providing visual aesthetic integration of the facility within the existing environs. Highway planting consists of new highway planting, replacement highway planting, highway planting restoration, highway planting revegetation, required mitigation planting, and irrigation system upgrade work.

- **TRANSPORTATION ART:** Chapter 29, Section 6-Landscape Architecture of the Project Development Procedures Manual (PDPM). Policy: the Department will encourage and promote enrichment of the cultural and visual environment for transportation system users and local communities by facilitating and coordinating the placement of artwork by others, within the State highway right-of-way, through the encroachment permit process.

- **COMMUNITY IDENTIFICATION:** Chapter 29, Section 8-Landscape Architecture of PDPM. Policy: the Department will encourage and promote enrichment of the cultural and visual environment for transportation system users and local communities by using a collaborative approach to facilitate and coordinate the integration of community identification within the State highway right-of-way. Community identification is defined as images or text that conveys information about a region, community or area. A Community Identifier is handled through the encroachment permit process.

- **GATEWAY MONUMENTS:** Chapter 29, Section 9-Landscape Architecture of PDPM. The Department is authorized to approve gateway monuments for installation within State rights of way. The pilot program shall terminate on January 1, 2008. A gateway monument is defined as any freestanding structure or sign, not integral to highway facilities, that communicates the name of a region, community or area. A Gateway Monument is authorized through the encroachment permit process.

The above sections of Chapter 29 of the PDPM are shown in Appendix 1.

IMPLEMENTING THE PLAN

The Project Initiation Document (PID) phase is established to identify and develop an appropriate scope of alternatives prior to programming. Preliminary information is obtained so that highway managers can be confident of the design concept and scope before the project's inclusion in the programming documents.

To properly scope roadside aesthetic elements a community corridor plan should be developed and implemented it into this Route 99 Corridor Master Plan. The Route 99 Corridor Master Plan will tract existing and add new plans as they are completed. The Route 99 Corridor Master Plan will aid roadway designers in preparation of a PID.

A Project Study Report (PSR), and any other equivalent project initiation document, is a report that documents the design concept, design scope, schedule and estimated cost of a project. Once the PSR has been approved the project can be submitted for programming.

Caltrans carries out long-term State highway system planning to identify future highway improvements and new transportation corridors. Projects are also identified in local and regional planning documents, in particular the Regional Transportation Plan (RTP). The PSR or equivalent document should include information from these products as appropriate.

Funding Programs

Programming is the process by which a public agency or a private company identifies specific funds for a project, based on a projection of revenues expected to be available at a specific time in the future.

Most State and federal revenues are programmed into the following documents:

- State Transportation Improvement Program (STIP)
- State Highway Operation and Protection Program (SHOPP)

Caltrans, regional and local agencies, and the CTC all have a role in developing these documents. Local agencies program their projects through a variety of documents; and when their projects involve State highway work, funding may be derived from a number of sources. Funding sources may include State highway funds, Congestion Management and Air Quality

Program (CMAQ) funds, a commitment of funds from developers, an establishment of an assessment district or other sources. If included in the project initiation document, many of the aesthetic roadside elements such as textured paving added to extended gores and concrete bridge slopes, retaining wall, soundwall and bridge textures, pedestrian fence treatments and lighting may be funded under the STIP and SHOPP programs.

Other funding sources may include the following:

- Transportation Enhancement Grants (TE)
- Local Sales-Tax Measure Projects
- Locally Funded Projects

Features such as enhanced planting, gateway monuments, community identifiers, and highway art may be funded under TE or local funds. In addition to funding these features maintenance agreements will be required as State forces will not maintain these facilities.

Throughout the planning, design and construction phases of a project, the possibility of entering into an agreement or agreements always exists. Every effort should be made to identify cooperative features as early as possible in the project development stage, particularly by the Project Development Team (PDT) where coordination and communication take place with the various units affected by the project.

5.1.2 Phase II: Project Approval and Environmental Document

Selection of the Preferred Alternative authorizes the completion of the Project Report (PR) for project approval. The PR documents Caltrans' approval for most types of State highway projects. This includes new facilities, as well as improvements, modifications, or repairs to existing facilities - whether done by Caltrans or by others under an encroachment permit. "Project Approval" means approval by Caltrans, and where required, approval by the FHWA and the CTC.

The environmental document is prepared to assure that the project complies with State and federal environmental laws. All project activities such as the development of project alternatives, public input, and selection of the Preferred Alternative are discussed in the Final Environmental Document (FED).

Selection of the Preferred Alternative occurs only after specific effects and reasonable mitigation measures have been identified for each project alternative. The selection is made after all comments are received from the circulation of the Draft Environmental Document (DED) for public comment and from the public hearing process. These comments and the rationale for selecting the alternative are detailed in the Final environmental document and summarized in the Project Report.

The Preferred Alternative is approved with Project Report (PR) approval by the District Director (or designee) after selection by the Project Development Team and recommendation of the Project Manager. It is difficult to change the scope of the project once the PR is approved. Changes to the project may cause a revaluation of the environmental document and require additional funds; such changes may result in the demise of the project. Items such as aesthetic features would likely not be added after this phase if it meant that the project would be canceled.

5.1.3 Phase III: Construction Contract Documents

Construction contract documents phase involves the preparation of Plans, Specifications, and Estimates (PS&E) for the construction of a transportation improvement project.
Project design is initiated by obtaining project approval. Because the development of cost estimates and design alternatives is required for project approval, a significant portion of the project design is often completed prior to the formal initiation of the design phase.

The responsibilities during this phase of the project development process include the following:

- Prepare quality plans that meet Caltrans standards, practices, and policies.
- Prepare project cost estimates and monitor costs to keep the project within budget.
- Utilize available resources to maintain project schedules.
- Monitor the project scope to ensure consistency with previous approvals.
- Inform the Project Manager (PM) of any cost, scope, or schedule changes that may be required for the project.

All aspects of the Plans, Specifications, & Estimate (PS&E) are verified before preparing the project for advertising. All permits must be current, right of way must be acquired and in possession, utilities in conflict must be scheduled for relocation, Freeway and Cooperative Agreements must be executed, and the necessary funds must be voted by the CTC.

After all corrections have been made to the PS&E, the contract documents are reproduced for distribution to prospective bidders.

5.1.4 Phase IV: Construction

Advertising the construction contract documents is the first step in the Construction Phase. The advertising period allows potential construction contractors the opportunity to prepare bids. The length of the advertising period is based on the cost and complexity of the project. After the advertising period, the contractor sealed bids are opened. The contract is awarded to the lowest qualified bidder, provided that all procedures and legal requirements have been fulfilled. The contract is then approved and the contractor is notified and the start of actual construction soon follows. Once the contract has been approved it becomes very difficult to make changes to the project.

Maintenance of the existing facility and improvements within the construction zone is typically the responsibility of the contractor during construction. Upon completion of construction, the Resident Engineer (RE) recommends acceptance of the contract. With the exception of enhanced planting, gateway monuments, community identifiers, and highway art, maintenance

of the facility typically reverts back to Caltrans following contract acceptance.

Local agency officials are involved in the process for those projects financed or constructed by the local agencies, but acceptance rests with the State for the portion of the project that is within the State right of way. When the contract includes work on local agency facilities, the local agency officials must be involved in the acceptance reviews.

5.2 Public Involvement Process

5.2.1 Local Involvement

The purpose of public involvement is to develop projects that respond to transportation needs with a minimum of community and environmental impact. Project team members must understand community values and opinions. All affected interests must be aware of a project's impact on them. Affected interests include individuals, businesses, associations, other officials, and institutions that may be affected by a project.

Existing community organizations provide an effective avenue for communicating with large numbers of people. Community organizations may include churches, service groups, fraternal organizations, business groups, civic and neighborhood associations, advocacy groups for the disabled, professional and trade organizations.

It is during the PID Phase that Caltrans and local communities should work together in implementing the proposed aesthetic features. Collaborative meetings should continue during the design process to address issues related to funding, design exceptions, and cooperative agreements. A local agency may wish to improve the appearance of the roadside by funding and maintaining sections of State right of way. Local participation may be either financial, or in the form of services, materials and equipment or a combination thereof.

Caltrans offers a combination of areas where a local community can safely identify itself. The roadway itself is largely constricted by safety factors, which negate the addition of aesthetic elements. The roadside, however, offers more opportunities for theme applications. A design concept with appropriate planting and aesthetic elements could create a sense of arrival and encourage travelers to venture from the highway to partake in local amenities. This document contains information needed to begin a collaborative involvement for all phases of the project development processes contained in Figure 5.1.

IMPLEMENTING THE PLAN

WHO TO CONTACT? For STIP or SHOPP projects Caltrans' District Project Management Office or Regional Transportation Planning Agencies shown below:

CALTRANS
District 6, Fresno Office: Kern, Tulare, Fresno, and Madera Counties
District 10, Stockton Office: Merced, Stanislaus, and San Joaquin Counties
REGIONAL TRANSPORTATION PLANNING AGENCIES
Kern Council of Governments:
Tulare County Association of Governments:
Council of Fresno County Governments:
Madera County Association of Governments:
Merced County Association of Governments:
Stanislaus Council of Governments:
San Joaquin Council of Governments:

Features such as enhanced planting, gateway monuments, community identifiers, and highway art should be coordinated through Caltrans District Landscape Architects or the Encroachment Permit Engineer. As mentioned earlier State forces will not maintain these features. Applications for enhanced planting, gateway monuments, community identifiers, and highway art should be submitted to Caltrans by a Local Entity such as the city, county, or township contiguous to the highway.

5.2.2 Public Meetings

The initial meeting is held with affected local agencies or their technical and planning staffs, along with other interested or affected groups. The meeting may be combined with the scoping meeting during the PID Phase for projects involving an EIS. The meeting is open to the general public. It should be well publicized. The initial meeting provides an early exchange of information and ideas, as well as an opportunity to discuss the proposed project timetable

5.2.3 Beautification Committees

Beautification Committees are usually made up of representatives of various citizen groups, business owners, and agencies of various levels of government likely to be affected by a project or proposal. They are distinctly different from technical advisory committees, in that their task is to express community opinion and concerns, not to provide technical expertise. Beautification Committees may consist of representatives from a single community, the entire county, or RTPA.

Examples of Committees actively working on Route 99:

- **Bakersfield Freeway Beautification Advisory Committee** - This group is comprised of private and public members the City of Bakersfield, and Caltrans. The focus of this effort is the Route 99 corridor, with Routes 58 and 178 included as well. A consultant Landscape Architecture firm developed this Master Plan.
- **Fresno County - The Association for the Beautification of Highway 99**. This group is a steering committee made up of private and public sector members from all five jurisdictions along the Fresno County 99 corridor, as well as Caltrans and the Fresno COG. The first product produced by this Association is the "Highway 99 Beautification Master Plan" for the County. This Master Plan was developed by a consultant Landscape Architecture firm, and completed in July of 2000. The implementation of the Plan is an on-going effort for the Association.
- **Pixley Redevelopment Project Area Committee.** - This committee is comprised of residents, business owners and community organizations. This group has adopted a "Community Development Plan" for Pixley. One of the goals of this plan is the landscaping of the Highway 99 Pixley corridor. The members are actively pursuing support for this project.

- **Goshen Community Plan.** - This plan is a component of the Tulare County General Plan, and was prepared by Tulare County Planning and Development Department in conjunction with interested groups, local agencies the Goshen Planning Committee and private citizens of the community. Included in the plan are elements addressing the 99 corridor aesthetics
- **Turlock** - The City has developing a Beautification Master Plan that includes the 99 Corridor. A consultant Landscape Architecture firm developed this Master Plan.
- **Stanislaus County - Route 99 Image Enhancement Plan Implementation Project Team.** This group is made up of private and public sector members from communities along the Stanislaus County 99 corridor, as well as Caltrans and the StanCOG. This plan is being developed in part by a consultant Landscape Architecture firm.
- **Stockton Beautiful** - Efforts for this group include the 99 corridor through town.
- **The Great Valley Center** - A Highway 99 Task Force has been organized and is working on developing a cohesive approach to transform the Highway 99 corridor into a "Main Street of the San Joaquin Valley". The limits of the project stretch from Kern County to San Joaquin County.

5.2.4 Route 99 Corridor Master Plan Advisory Committee/Corridor Theme

The Route 99 Corridor Master Plan Advisory Committee will consist of representatives of various Caltrans functional units. Functional units will include Planning, Project Management, Landscape Architecture, Hydraulics, Maintenance, Operations, and Environmental. The advisory committee will review projects for compliance with the Route 99 Corridor Master Plan and Caltrans' current standards and practices. The committee will consider whether the proposed improvements:

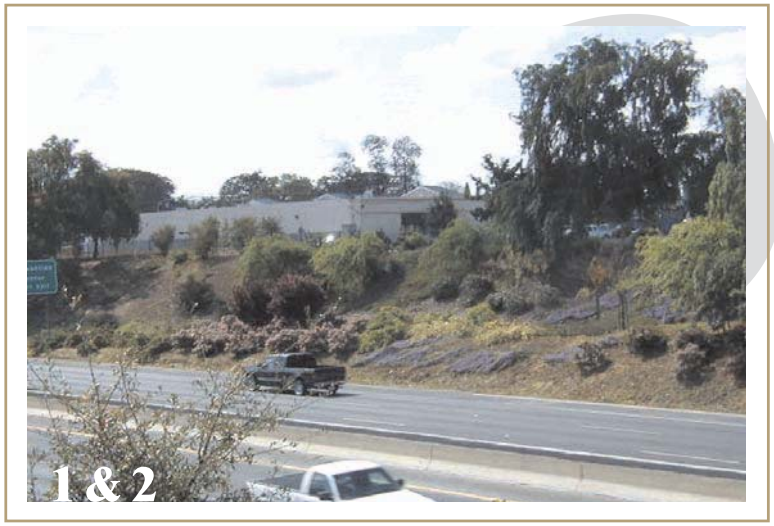
- Ensure safety of the highway users
- Ensure compatibility with the primary uses of the State high way system
- Protect, maintain, and enhance the quality of the State high way system
- Ensure that the Corridor Theme - "Route 99-The Mainstreet of California's Heartland-Linking Heritage to Innovation," is consistently yet uniquely applied throughout the Route 99 corridor.

The Route 99 Corridor Master Plan Advisory Committee should review proposed improvements during project initiation and prior to project approval.

5.3 Roadside Elements

The following list delineates existing opportunities that local entities can use to benefit the image of their community.

LANDSCAPE:



1. Enhance planting to include more detail and greater variety of plants.

2. Annual mulching to keep weeds down.

3. Wild flower seeding.

4. Transportation Artwork

5. Landscape Maintenance

6. Trash collection

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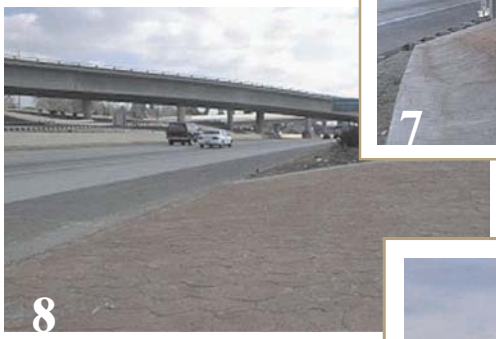
ROADSIDE:

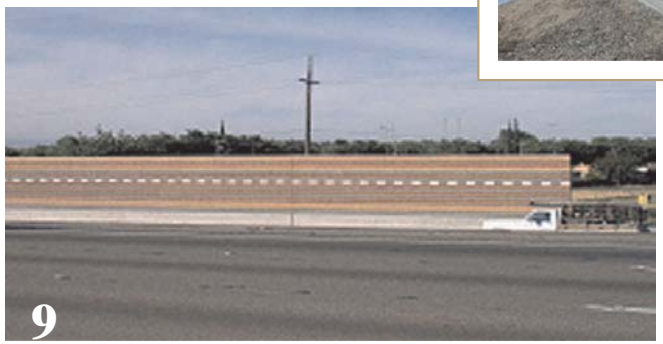
7. Gore paving (Colored, textured concrete in areas too narrow to plant and maintain safely)

8. Slope paving. (Colored, textured concrete under bridges).



9. Soundwall treatments (Colors and designs within sound walls)

10. Retaining wall treatments



11. Overcrossing treatments (Colors and textures)

12. Overcrossing fence treatments (Three standard treatments, many non-standard)

13. Median Barrier Aesthetics

14. Lighting

15. Planting on overcrossings


16

16. Gateway monuments


17

17. Community identifiers.

5.4 Case Study

The principal purpose of Bakersfield's, Freeway Beautification Master Plan and Design Guidelines is to provide a long-range strategy for improving aesthetics and ambience of the principal arrival gateways and transportation corridors within Metropolitan Bakersfield and enhance the image of the City for residents, businesses and travelers.

The intention of the Freeway Beautification Master Plan and Design Guidelines was to:

- Define the study area
- Inventory existing conditions along the freeway right-of-way and key land used within the city
- Categorize opportunities and constraints
- Formulate goals and objectives
- Develop corridor development guidelines and schematic landscape architectural master plans
- Portray unified community design themes, criteria, and standards

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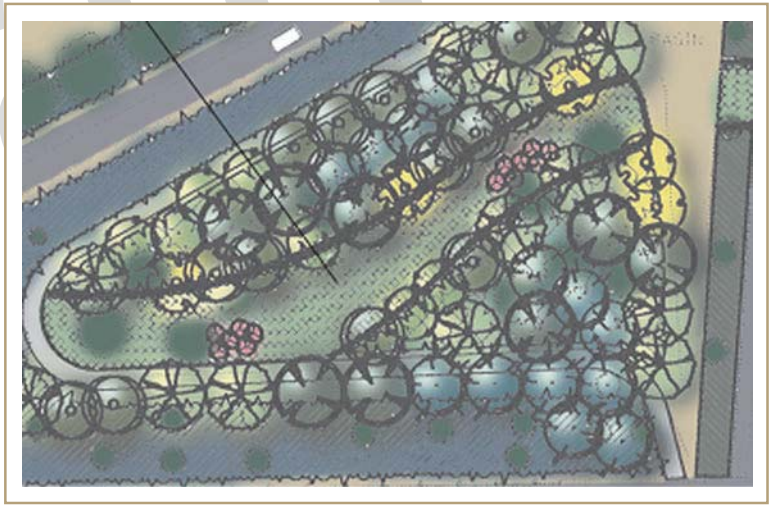
- Create significant gateway landscaping theme elements at points of entry
- Identify and screen views of incompatible, adjacent land uses
- Identify windows of opportunity to preserve scenic vistas or accentuate key features along the freeway corridors.

5.4.1 Bakersfield Master Plan Process

Bakersfield's master plan requests landscape design, heavily reflect the surrounding agriculture. Shrubs and groundcovers are to be massed in a linear fashion to emulate the striped nature of agricultural row crops. Large amounts of hardscape were proposed to reduce maintenance in narrow areas. Bakersfield had identified the river as the primary influence. They wanted designs to reflect and emulate this natural feature.

Caltrans' Landscape Architects used this information in a Landscape Rehabilitation project that stretched from California Ave to the 204/99 interchange. Meshing this information with the concept put forth by the State (Route 99, The Main Street of California's heartland, linking heritage to innovation.), the Landscape Architects assembled a design that harmonized with the Cities desires and the Corridor Concept. To avoid requiring a maintenance agreement between the city and the State, the Landscape Architects simplified the planting arrangement in areas that would be difficult to maintain and add detail to areas with good access.

The resulting design emulated a river; added formal planting in areas that would function as entryways. Native plant material was almost exclusively used adjacent to the river to blend the highway into the viewshed of the river trail user. Colored, stamped concrete in gore areas was proposed to aid in reducing maintenance exposure to traffic. Tall evergreen trees were proposed to screen industrial facilities adjacent to the highway, while views to the river were left open.



The City of Bakersfield clearly outlined the desire to enhance the prominence of Kern River, through landscape elements within the highway corridor. The highway beautification master plan delineates areas of importance and significant community

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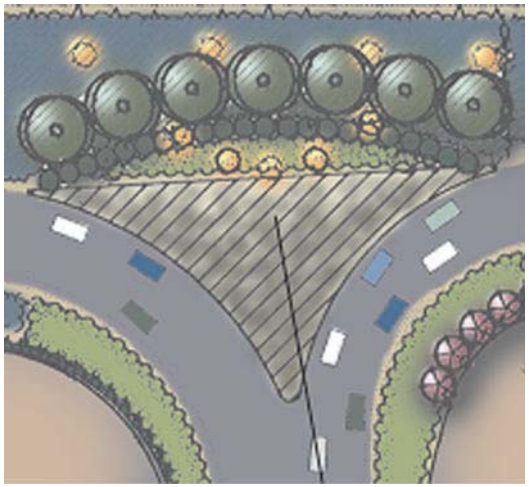
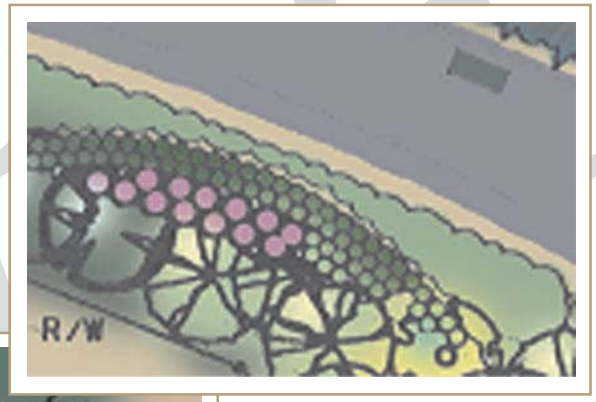
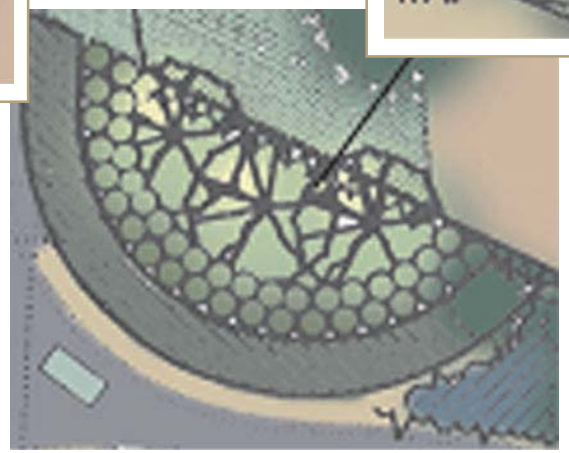
elements adjacent to the highway. These elements were also emulated within the States right of way.



On and off ramps host a variety of planting that emulates entryway monumentation. These elements mirror or enhance existing elements outside the States right of way.





The State is allotted a finite amount of funding for landscape projects.
It is with this funding that Landscape Architects have to accomplish the following:

- Cover the roadside within the project limits with a variety of trees, shrubs and ground covers.
- Provide associated irrigation systems with Remote Irrigation Control System
- Provide gore paving
- Install booster pumps and associated electrical systems
- Install access gates, vehicle access pads and other associated components designed to increase maintenance personnel safety.
- Provide erosion Control and permanent storm water control measures

Attachments:

1. Bakersfield
   - Attach: Bakersfield Highway Beautification Master Plan
2. Fresno
   - Attach: Fresno 99 Beautification Master Plan

CHAPTER 6 CONCLUSION

The 99 Master Plan will be finalized, and a conclusion drawn, once we have received and reviewed all comments from the public, local community groups and local agencies.